

ELEMENTS OF ECONOMICS

(According to New Syllabus for 1943)

for

INDIAN STUDENTS

by

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CHAPTER IV

DEMAND

Relation between Quantity and Price.

* We have studied the relation between the quantity of a commodity consumed, or acquired, and the utility or satisfaction derived; we now proceed to study the relation between the quantity acquired and the sacrifice that is needed for its acquisition; in other words, the precise relation between quantity and price.

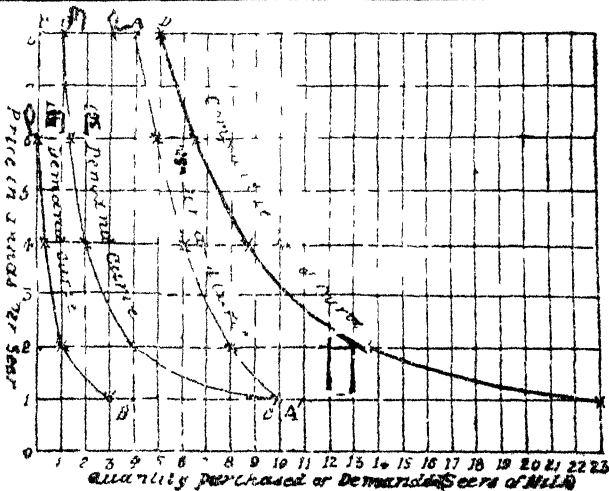
We have seen that Economics takes account only of such desires as are coupled with the capacity and preparedness to pay for their satisfaction. Demand therefore is always expressed in offers of things of value (*e.g.*, money) for other things of value. It should be noted that DEMAND for anything denotes neither the quantity demanded nor the price paid, but quantities which will be demanded or purchased at different prices; it states the relation between quantity and price; it is never absolute, but always relative. When speaking of demand, we always speak of it as *at a price*; thus there is no meaning in saying that a man demands five seers of wheat, or that his demand for wheat is five seers; nor in saying that demand for wheat in the Punjab is not enough to take the whole crop produced in the province and hence there is always a surplus of wheat. The point to be noted is that when wheat is sold at five seers to the rupee a man may be prepared to buy only five seers of it, since at any time he can afford to spend only one rupee on wheat; but if wheat is sold at ten seers to the rupee he may be prepared to purchase much more. There is never so much wheat produced in the Punjab, but

that, if it were cheap enough, the whole of it would not be consumed in the province, hence there is little point in speaking of a surplus of wheat. One may find at an auction sale that when bids start at a low figure there are many bidders; there is very great demand at a low price, but as bids go higher and higher, possible purchasers fall out and demand decreases.

Demand Schedule.

We may now represent the demand from a few representative persons for a commodity (*e. g.*, milk) as follows:—

Price of Milk per seer	No of seers bought by a rich man (A)	No of seers bought by a poor man (B)	No. of seers bought by a middle class man (C)	Total number of seers bought by A, B and C
8 annas	4	...	1	5
6 "	5	...	1½	6½
4 "	6	½	2	8½
2 "	8	1	4	13
1 "	10	3	10	23

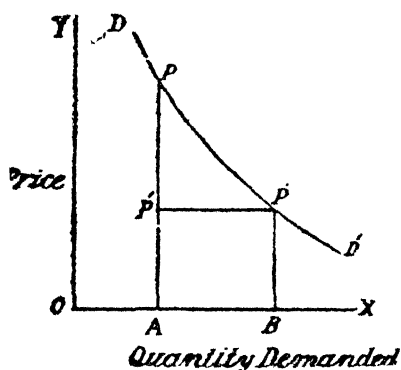


This is called a Demand Schedule, and we may plot these points on a graph. Along OX we measure the quantity demanded and along OY the price per unit; the curves AA' , BB' and CC' represent the demand schedules of A, B and C respectively.

DD' is the combined curve of the total demand of A, B, and C. If A, B and C are the only purchasers in a market then DD' is the Market Demand Curve.

Law of Demand Price.

We may now state the Law of Demand Price as follows :—



At any given time, as the price per unit of a commodity falls, the quantity demanded *extends*; conversely as the price per unit rises, the quantity demanded *contracts*. The curve shows graphically that as the price of a commodity falls, say from PA to $P'A$ the quantity demanded extends from OA to OB .

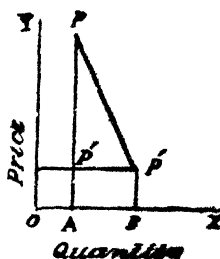
Extension and Contraction.

Observe that price acts as a pressure which, when it is increased, contracts the quantity demanded and when it is decreased expands demand by releasing the pressure. It may help to keep the idea clear if we always speak of changes in quantity demanded due to price as *extension* and *contraction*, instead of *increase* and *decrease*, for there are other kinds of changes in demand, *e. g.*, due to the effect of substitutes, changes in fashion, habits and taste, increase of utility, etc., which we speak of as *increase* and *decrease*, or *rise* and *fall*, in demand.

Elasticity of Demand

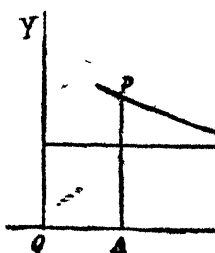
(The further question, "By how much is the quantity demanded extended or contracted by any particular fall or rise in price?" leads us to a consideration of the Elasticity of Demand.) The variations in demand consequent on changes in price depend upon a number of circumstances which vary for different commodities of which the following are examples.

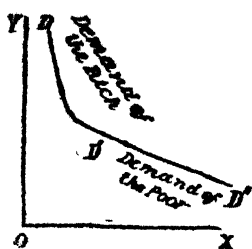
First, take a commodity which is considered to be one of the necessities of life, and for which there is no substitute, *e.g.*, salt. The demand for this is more or less fixed and is not effected very much by changes in price; practically every one uses it, whether it is sold at a high or low price, and consequently even if the price falls from PA to $P'A$, the quantity demanded will be extended only from OA to OB . The demand in such a case is said to be *inelastic*.



Secondly take the case of a luxury, *e.g.*, bicycles used purely for pleasure. Here, even a little fall in price, will induce many more persons to buy them; a fall of price from PA to $P'A$ extends the demand from OA to OB . In this case demand is said to be *elastic*.

Thirdly take a commodity such as coffee for which some substitute drink may be used. Any rise in its price will tend to make people take some other beverage in place of coffee and in this case also, the demand is said to be very elastic.



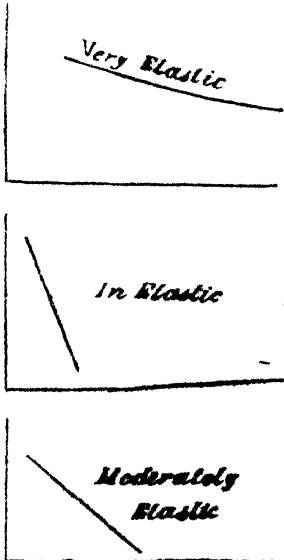


Lastly, if the purchasers of any commodity are rich people, a small change in price will not affect the quantity bought very much, i.e., demand is inelastic, but if the buyers are poor, the demand for this same article may be elastic.

The elasticity of demand for a commodity in a market is great or small according as the quantity demanded is extended much or little for a given fall in price, and contracted much or little for a given rise in price. As we have seen, elasticity of demand depends upon a variety of circumstances, such as the nature of the commodity, or the demand for it, and on the economic circumstances of the consumers.

The best method of comparing the elasticity of demand for various commodities is to draw demand curves of the commodities, the elasticity of demand of which it is sought to compare.

The shape of the curve will easily give an idea of the elasticity; the flatter the curve, the more elastic the demand for the commodity; the steeper the curve, the more inelastic the demand.

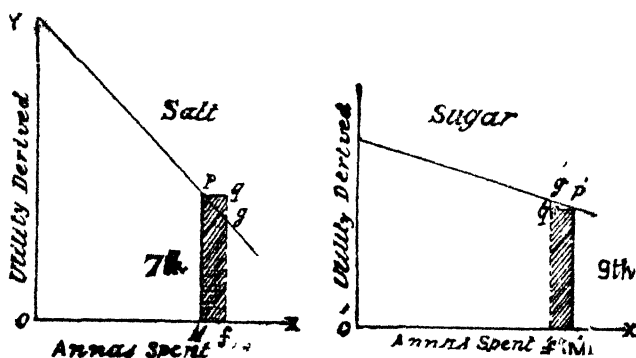


Law of Substitution or Equi-marginal Utility.

We have explained in our treatment of marginal utility that people stop the consumption or purchase of an article at the point where the marginal utility is just balanced by the utility of the marginal payment. At this point, buyers not

only balance in their minds the utility of an article against the cost, but continually compare the utility of one article with that of another. When the expected satisfaction from one article falls below a certain level, expenditure is diverted to a commodity the utility of which is estimated to be greater. A housewife does not merely deliberate whether she will buy bread and vegetables, ghee and milk, but she also decides how much of each she will purchase. Here the decision depends upon the amount of money she has to spend, the prices charged, and also the utility she places on the various units of the different articles. She will be satisfied if, after the purchase, she has no reason to regret that an anna spent on any particular article would have brought her greater utility than an anna spent on any of the others; then she will have obtained the maximum satisfaction, as the last anna spent by her on each of the articles has brought to her the same amount of satisfaction. This is called the Law of Substitution, or the Law of Equi-marginal Utility. In the expenditure of a sum of money on two or more commodities the total utility will be at its maximum, only if the marginal utility in each case is just equal.

To show this diagrammatically, let us suppose that we have a rupee to spend on two commodities, say salt and sugar. Along OX and $O'X'$ we measure units of outlay of money, *i.e.*, annas, and along OY and $O'Y'$ units of utility obtained from the expenditure of an anna in each commodity. If we draw the diminishing utility curves of each commodity, we find that the ninth anna spent on sugar has the same marginal utility $M'P'$ as the seventh anna spent on salt, *i. e.*, $M. P$. The total utility obtained from the expenditure of a rupee on the salt and sugar is $OMPY + O'M'P'Y'$. To show that this will be a maximum only when PM and $P'M'$ are equal, let us suppose that a purchaser makes a



mistake and spends an anna more on salt than he intended ; the addition to his utility by the expenditure of the eighth anna on salt is PM/fg . But now he has only eight annas left for sugar. The loss to his utility by the expenditure of one anna less on sugar is represented by $P'M'f'g'$. The area $P'M'f'g'$ is greater than the area $PMfg$, (the rectangles $PMfg$ and $P'M'f'g'$ being equal) and hence, as the result of the extra expenditure on salt the total utility or satisfaction is less than it might have been if seven annas had been spent on salt and nine annas on sugar. As every one desires to get the maximum satisfaction out of money spent, we try to regulate expenditure so that the marginal utility of every article purchased is just equal.

Inter-Relation of Different Demands.

From what has been said above we can see how the demand for one article may affect that of another. Generally, things are demanded in groups ; most people get accustomed to a particular standard of life and demand things suitable for that standard. A college student wants books, suits, shoes, ties, and maybe, a bicycle ; a lawyer may want a library, a motor car, an office, and a good house ; a labourer may require only food, clothing and tobacco. There seems to be no

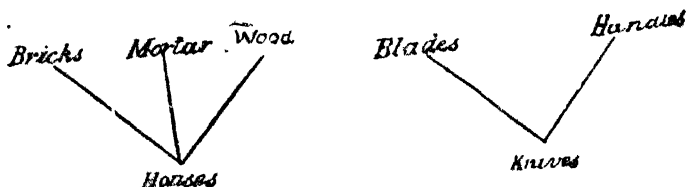
such thing as a demand for a detached article ; things are wanted as parts of a systematic whole.

Demand for one article is often closely connected with the demand for others ; sometimes we substitute one thing for another. If, for example, the price of wheat rises, people may use maize as a substitute. The demand for one article may stimulate or create a demand for another ; thus the demand for motor cars creates a demand for petrol ; or a demand for shoes creates a demand for socks.

ALTERNATIVE DEMAND. Goods are said to have an alternative demand when a purchaser has a choice of two or more articles. Thus, where one may take either tea or coffee, the demand for tea and coffee is said to be alternative.

DERIVED DEMAND. This is a demand for things used in making other things, *e. g.*, the demand for hops, malt, etc., is derived from the demand for beer. Demand for the factors of production is derived from the demand for the commodities to be produced.

JOINT DEMAND. On the other hand, where two or more things are wanted together they are said to be in joint

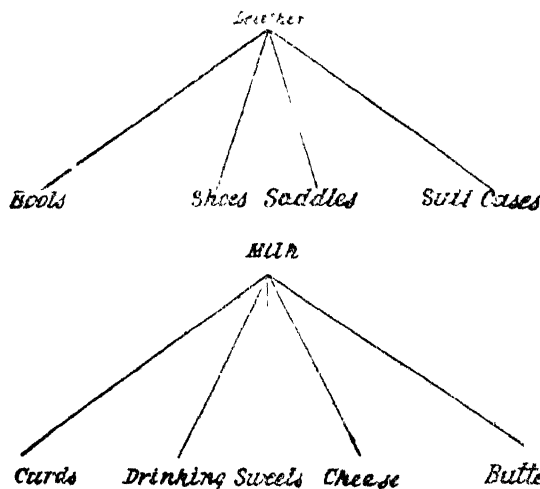


demand. There is generally a joint demand for shoes and laces ; bottles and corks ; whisky and soda ; carriages and horses ; bread and vegetables. The demand for knives is a joint demand for blades and handles ; a demand for houses is a joint demand for bricks, mortar, mud, wood and

the labour of masons, carpenters, architects, etc., and for many other things required in the construction of houses.

COMPOSITE DEMAND. Many raw materials can be used in the production of entirely different final products. Barley can be used in making bread or beer; rubber has a large number of uses *e. g.*, for tyres, shoes, fountain pens, tennis balls and road-paving. Most things have more than

Utility Derived



one possible use to which they "can be put and in such cases the demand for the commodity is said to be composite: it is really one demand made up of different demands.

SUMMARY

Demand is a relative term expressing the relation between quantity and price; it is expressed in terms of quantities purchased at given prices.

A list of the quantities of any commodity purchased at different prices is called a Demand Schedule. If a list is prepared of all the purchasers in a market, we get the market demand for any commodity at any given time. We can draw a curve to show the relation between the price and quantity of any commodity that would be sold in the market at different prices; this gives us the *market demand curve*.

Law of Demand : - The quantity of any commodity demanded at a given time varies with changes in price; with every rise the quantity

demanded is *contracted* and with every fall in price, the quantity demanded is *extended*. If it is extended or contracted considerably for a given rise or fall in price, demand is said to be elastic; while if it is extended or contracted only a little, the demand is said to be inelastic. Generally demand is inelastic for necessities and elastic for a commodity with different uses and for commodities having substitutes; for rich people it is more inelastic than for poor people. Elasticity of Demand can be compared by drawing the demand curves and by comparing their shape.

Things are generally demanded in groups. Where either one thing or another may be demanded, the demand is said to be Alternative; where two or more things are demanded together the demand is Joint, while if one thing is demanded for several purposes, the demand for it is said to be Composite. In purchasing different commodities we try to regulate our expenditure so as to get the maximum total satisfaction from our outlay, and so purchase every commodity up to the point where its marginal utility is just equal to that of any other thing we buy. This is called the Law of Substitution or Equi-marginal Utility.

Questions and Exercises

- What is Demand? Examine the following statements:—
 - A's Demand for wheat is greater than B's
 - A rich man's demand is always greater than that of a poor man's.
 - The total demand for this book last year was 5,000 copies.
 - Lahore's demand for pure milk is much greater than the supply.
 - The total demand for wheat in a village is less than the total supply.
 - My demand for milk at present is ten soers.
- Draw a market demand curve for mangoes on a particular day in an Indian village.
- Show graphically, that in the expenditure of a sum of money on two or more commodities, the total utility will be at a maximum only when the marginal utilities are just equal.
- Prove that even fair gambling involves an economic loss.
- Draw a curve showing the elasticity of demand for rupees. Do you notice any peculiarity?
- Why does the Elasticity of Demand for any commodity vary with different prices?
- Compare the Elasticity of demand of a rich man, a poor man and a man of moderate means respectively, for the following commodities:—
 - butter, (b) wheat, (c) jowar, (d) motor cars, (e) milk, (f) potatoes, (g) tea, (h) cigarettes.
- Explain: (a) Effective demand, (b) Demand Schedule. (P. U. 1934)
- What do you understand by the terms Extension and Contraction of Demand? Why are the terms used in preference to increase and decrease? Are any other words also used to denote changes in demand?

10. Give instances of commodities, the demand for which varies at different times of the day, and explain why these differences occur. How would you denote such changes in demand by means of a graph ?

11. If you had an income of Rs. 100 a month how would you arrange your expenditure ? How much of it would you save ?

12. Explain the relation between the Law of Demand, Diminishing Utility and Substitution ?

13. What are the uses of graphs in Economics ?

14. Explain briefly Joint Demand, and illustrate it with an example. How will the price of the hockey balls be affected if the supply of the hockey sticks increases ? Is the principle of joint demand of any importance in the theory of Distribution ? (P. U. 1933)

15. What do you understand by Elasticity of Demand ? Show that elasticity of demand is low for necessities, moderately high for comforts and very high for luxuries ? (P. U. 1937)

With reference to elasticity why do salt, tea and motor-cars differ ? (P. U. 1939)

16. State the Law of Demand and point out the difference between Individual Demand and Market Demand. What are the limitations of the Law of Demand ? (P. U. 1935)

17. Enunciate the Law of Demand and point out its relation to the Law of Diminishing Utility. (P. U. 1938)

CHAPTER V

VALUE AND WEALTH

Economic Terms.

We now proceed to discuss the related problems of value and wealth, but before doing so a word or two should be said about the question of the terms used by writers on Economics. Other sciences have special sets of words of their own, and there is therefore nothing peculiar in the fact that economists give a particular meaning to certain words in regular use. Many students of Botany, for instance, know how many terms they have to learn and remember. In the study of Economics, terms are employed which are also used in everyday life, but a special meaning is often given to them. One of the first things to do then, in our study, is to be careful to see that we understand the exact meanings of the words used. Many mistakes are made because this precaution has not been observed and much time and energy have been wasted in attacking what was believed to be the teaching of economists, who were quite innocent of the ideas assumed by their vilifiers; often, they were trying to convey something entirely different. That is one of the difficulties of a study which has to do with everyday affairs, hence we should be quite sure of our definitions.

Meaning of Value in Economics.

One of the words frequently used is "Value" which, in ordinary everyday speech, is used as synonymous with "Worth." If we want a nail and find one which is broken, we say that it is worth nothing, that it is valueless. Value or worth thus implies usefulness or utility, but the same thing may have great value in the eyes of one person and

none in the eyes of another. Compare, for instance, the value of liquor to a heavy drinker, with its value to a total abstainer who is not a trader in such beverages. Some men may value health more than riches ; others may value character or religion more than health ; one may value a gift from a friend so much that one may not be prepared to part with it at any cost ; a stick may be of great value to a blind man. Anything to which a man attaches any importance has value for him.

In Economics, however, we do not use the word value in such a wide sense ; utility is the term used which corresponds to the common use of the word value. Some writers use the phrase, 'value-in-use' or 'subjective value' to express this particular idea but the use of such a phrase very often leads to unnecessary and confusing complications. The term *value* in Economics has a more limited meaning than it has in everyday speech : only those things are regarded as having value, the worth of which can be estimated in terms of money, because Economics treats of those social phenomena in which the strength of the motive can be measured by money.

Some things which a particular person prizes highly may have no value when they are thrown on the market. Light and air and sunshine, which are useful for everybody, have no value in a market because they are free gifts of nature and can generally be obtained without payment. No economic problems arise about such things and therefore, no matter how much may be the utility or usefulness or worth of these things, *i.e.*, although they have utility or the quantity of usefulness, they are not regarded as having a value in Economics. People from crowded cities will, however, sometimes pay to get sunshine and fresh air and then those things have an economic value. Similarly a stick which may be very valuable to a blind man may have little value in the market, since all stick buyers are not blind. On the other hand articles specially intended for display and show

(such as, diamonds), have little real worth, but command great value in a market.

Definition of Value.

Value is the estimate we put upon utility, or a unit of utility, because it has a power (and according to such power) of affording satisfaction. It is different from utility, which is pleasure itself, but value is the degree with which we want it, or the sacrifice we are prepared to make rather than go without the pleasure. Value is the measure of utility in terms of other goods, it is the power which an article has of commanding other goods in exchange for it, or the purchasing power of a 'good' in the market. Anything that can be bought and sold has value, and under modern conditions value is measured in money. When expressed thus, in terms of money, it is called "Price." One may, for instance, get a book in return for ten seers of wheat, or for a week's labour, or for five rupees, or for five seers of wheat and half a week's labour. Each of these is the value of the book, but five rupees, or the value expressed in terms of money, is spoken of as the price of the book.

VALUE IMPLIES A COMPARISON. Value is a term relative to the market. It does not mean the subjective worth of a thing to its owner, but the objective money, or goods, or services which a possible purchaser will give for it; there is no value apart from a market. If a Robinson Crusoe living on a lonely island produces everything for himself, no problems of exchange arise and no questions of value and price exist; although the canoe he builds may have great utility for him, the economist says it has no value, unless there is a possible purchaser. If in a village each family were to produce all the things it needed for itself there would be no problems of value. Although an agriculturist raises food grains for domestic consumption, the produce from the farm goes first

in payment of the wages of the village officers, menials and artisans. How much is to be paid for the services of each? Are the services of the blacksmith worth more than those of the potter? These are the problems of value. Those agriculturists who produce much more than is required for their family needs and can place their surplus product on the market are much better off than those who have only just sufficient for their needs: with the money obtained for the surplus the owners may purchase other comforts and luxuries of life.

Wealth.

Another word closely related to value, which the economist uses in rather a special way is Wealth. Ordinarily, when we speak of a person's wealth, we think of his houses, carriages, jewels, gold and silver. For the economist the word means not only these things, but also many more, while a philosopher would give a much wider meaning to the term wealth; he would include character, health, love, joy, and even life itself in the category of wealth. Economists, for purposes of precision in scientific study, have to give a more restricted meaning to the term and they use the word wealth as the correlative of value. Anything which can be brought, or sold, or exchanged for something else is wealth. When an economist says that a cap is wealth, but air is not, he does not mean that the cap is more useful than air—all that he means to say is that people are prepared to pay something for the cap, but nothing for air, since the latter can usually be had in unlimited quantities free of cost.

Attributes of Wealth.

Now what is it that gives value to goods? Why are some goods wealth and others not? In the first place no one is prepared to pay for anything which has no utility and, the greater the satisfaction one desires from a 'good,' the

more one is prepared to pay for it.* As we have seen, any particular article may have utility for one man but none for another, and also the same thing may possess utility, or not, according to the time and place at which it is available. In order, however, that someone will be prepared to pay for, or purchase, a 'good' it is necessary that it shall possess some **Utility**.

Secondly no one will give anything of value in exchange for something which can be obtained free. No man will pay money, or give labour, in order to possess a certain quantity of sunlight and air except under very special circumstances. Thus a 'good' in order to be wealth, should be *limited* relatively to the demand for it. **Scarcity** is the earmark of value and, therefore, of wealth.

Thirdly, to possess value, an article should not only be limited in quantity but also it should be capable of being transferred from one person to another. No one will give anything in exchange for an object, the utility of which he can provide for himself, or for others whom he wishes to please. Thus, a good character may be useful as well as scarce, but it cannot be transferred from one person to another ; it cannot be purchased and so it is not wealth. Similarly the skill of a carpenter, or the learning of an advocate, or the knowledge of a doctor, cannot be transferred, and are not their wealth ; the skilled labour of the carpenter, the pleading of the advocate and the advice of a doctor, however, can be sold for a monetary reward and therefore, are wealth. **Transferability** here means the capacity of having ownership, which may be passed to another, but does not imply portability from one place to another. Land is transferable in this sense though it cannot be carried from place to place.

We have seen then that a commodity in order to possess value or wealth must be useful, transferable and

limited in quantity. It is sometimes stated that a fourth condition must be fulfilled, *viz.*, that it must be the result of labour or sacrifice. Perhaps some amount of labour is necessary in order to obtain wealth, though it may be only the picking of strawberries or the lifting of a diamond from the ground. Land, though a gift of nature, has to be cleared and fashioned and made productive, but the labour of producing such commodities is mostly negligible and the value is incommensurate with the labour spent. Perhaps this fourth condition may be disregarded, since it narrows down and limits too much the scope of the definition of wealth.

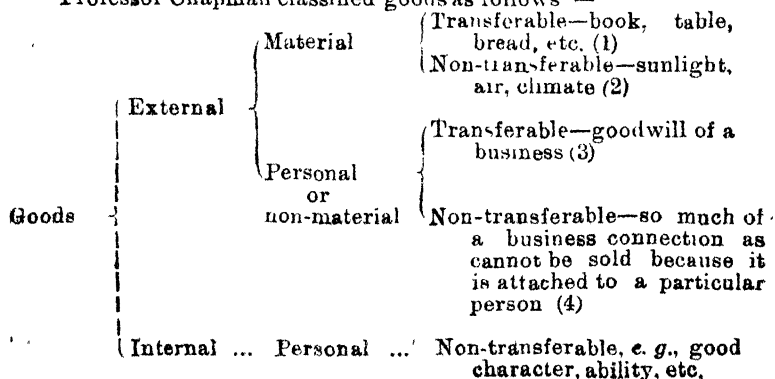
Classification of Goods.

Goods may be classified as free or economic, but we have seen that the former are not wealth, as wealth consists of economic goods only, which may be further divided as material and non-material. The former are such things as food, clothes, and shelter, or the benefits which may accrue to a man from things, such as copyrights and toll charges. Non-material goods are subjective, they include a man's capabilities and attributes as well as such intangible items as goodwill.*

Individual Wealth.

The wealth of a person consists of material belongings

* Professor Chapman classified goods as follows —



such as money, suits; bread and books, non-material exchangeable goods such as the goodwill of his business and his share of those exchangeable goods which belong to him in common with others, *e. g.*, the roads, post offices, museums etc. There is a tendency to include also industrial qualities, such as the skill of a carpenter, as part of individual wealth. They may be called **Personal** wealth but the general term "wealth" should be confined to its narrower use. From the above-mentioned things, the debts he owes must be deducted.

National Wealth.

The wealth of a nation, or National Wealth, consists of the aggregate of the wealth of the individuals who constitute the nation. In calculating the aggregate, care should be taken that no item is included twice, *i. e.*, debts due from one member to another of the same community must be excluded.

National wealth includes :—

(i) Material public property such as railways, public buildings, roads, parks etc.

(ii) Such free goods as useful rivers, harbours, a good climate etc. The Ganges is a part of the wealth of India ; so are the climate and scenery of Switzerland and Kashmir. A broken coast-line with its good natural harbours, is part of the wealth of England.

National Income.

The idea of National Income is closely allied to that of wealth. It is the wealth a nation produces during a particular period of time, say a year, a month, or whatever may be the given unit. Professor Marshall defines it as the "net aggregate of commodities, material and immaterial, including services of all kinds, which the labour and capital of a country, acting on its natural resources, annually produce." The annual income of an

agriculturist consists of* the gross produce of his land during the year, minus the wages of any labourers he may employ, the rent, the revenue and rates paid by him, the costs of renewal of implements, cattle purchases and upkeep, cost of seed and marketing.* His wealth at any time is the value of his land, cattle, plough and other implements, grain, house and clothes, *i. e.*, all things he owns, minus his debts. (The debts are, unfortunately, very important in the case of Indian agriculturists.) Wealth is a *fund*; income a *flow*.†

SUMMARY

The term Value in Economics has a narrower meaning than it has in everyday language where its ordinary use is synonymous with the word Utility. Value means the power which a 'good' has of commanding other things in exchange for it, expressed in terms of money it is called Price.

Wealth also has a different meaning in Economics from its ordinary usage. It means goods or things that possess value.

* The annual gross income per acre of some holdings in the Punjab in 1932-33, as given in "Farm Accounts in the Punjab" (a publication of the Board of Economic Inquiry) was Rs 13-2-3. After deducting Rs. 22-14-5 as the expenditure, which consisted of land revenue and water rates (46%), upkeep, of bullocks (36%) seed (8%), harvesting charges (3%), implements (3%), *Kamins* (2%), winnowing charges (1%), and miscellaneous (1%) the net income is Rs. 20-3-9.

The following statement taken from Farm Accounts of 1934-35 shows the income per acre of holdings in the Punjab from 1928 to 1937 :—

Year	Gross income Rs. a. p.	Expenditure Rs a p	Net income Rs. a. p.
1928-29	63 8 1	30 15 9	32 8 4
1929-30	51 11 11	31 10 8	20 1 3
1930-31	31 4 3	32 6 11	7 13 4
1931-32	31 6 11	19 8 9	11 14 2
1932-33	43 2 3	22 14 6	20 3 9
1933-34	33 5 7	21 9 4	11 12 3
1934-35	38 2 1	21 1 6	17 0 7
1936-37	40 0 0	19 0 0	21 0 0
	41 8 11	24 14 5	27 12 9

†We may also speak of Cosmopolitan Wealth, or the wealth of the world as a whole. This includes the sum of the wealth of all the nations (deducting debts due by one nation to another) and such free goods as form part of the world's wealth, *e.g.*, the ocean.

In order to possess value and to be wealth a 'good' must possess :

(a) Utility, (b) Scarcity, (c) Transferability.

Goods may be classified as free and economic, material and non-material.

Individual wealth consists only of external, material, transferable goods and the external, personal, transferable goods of an individual.

National wealth consists of the aggregate of the wealth of the individuals, plus public goods and such free goods as rivers, climate, etc. It is a fund.

National Income is the wealth produced in a nation by its people working on its natural resources within a certain period of time. It is wealth considered as a flow rather than as a fund. Just as a river flows out of a lake, so income flows out of a nation's wealth.

Questions and Exercises

1. "We give you full value for your money." What is the meaning of "value" in this advertisement? How does it differ from the meaning of the word value in Economics?

2. "There is no wealth but life."—(Ruskin). Explain.

3. What is the meaning of wealth in Economics? Does the fact that wealth has a narrower meaning in Economics mean that the latter is necessarily a science with a narrow outlook?

4. What is the connection between wealth and value?

5. Which of the following are wealth?—A rupee, a diamond, love, happiness, music, a good character, health, a book, whisky, a quack medicine, doctor's advice, a servant's work, a paper currency note, goodwill of a business, air, the post office, the Himalayas, the poetry of Kalidas, Buddhist architecture, a museum, the *Upanishadas*, the sermon of a missionary.

6. What is the relation between wealth and income? "National income is a better test of national prosperity than national wealth." Explain.

7. Can you find the value of an agriculturist's land from its annual produce? How would you find the value of India's agricultural land?

8. If a Rs. 100 share of an Indian company sells today at Rs. 100, what is the approximate rate of dividend the company is paying?

9. If a company with a paid-up share capital of 5 lacs, consisting of fully paid shares of Rs. 100 each, is paying a dividend of 12 per cent., at what price would you be prepared to purchase its shares?

10. Make a list of the things which constitute the wealth of an average Indian agriculturist. What is its total value? What is his total annual income and what relation has his income to his wealth?

11. Study the sources of income of ten different men in your town or village, and show whether those with much wealth have also a large income or not. What classes of people have large incomes without much wealth?

CHAPTER VI

STANDARD OF LIVING

The end of all production is consumption and it is part of the business of the economist to enquire whether an increase in the quantity of goods produced has led to an increase in the consumption by the different classes in a country. National prosperity depends not only on the growth of national income but also on the way in which it is spent. If the national dividend is doubled, but all the increase is in the hands of a few people, then probably there will be no increase in the economic well-being of the people as a whole. The highest economic welfare of the greatest number should be the aim of all work, and how to secure this desired state for the great majority should be the chief concern of every one seeking the public good. It does not make much difference to a rich man if his income increases from ten thousand to eleven thousand rupees a month but it does mean a great difference to a poor man if his income increases from ten to eleven rupees a month. The marginal utility of money is greater to the poor than to the rich, and the economic welfare of a country can be said to have increased only if and when the consumption of every class of the community, and especially of the poorer classes, increases. The kind and quality, of the thing consumed should be taken into consideration when welfare is the objective; an increase in the consumption of liquor, cigarettes and tea at the cost, say, of *ghee* and milk, can hardly be said to be a sign of greater prosperity.

But what is our test of quality? We have said before that, to an economist, even liquor is a 'good.' Our test

therefore is not the moral value of things ; we have to judge the quality of consumption from the effect it has on the efficiency of man for wealth production. If the effect of consuming goods such as butter and milk is increased by reducing say, the consumption of tea and cigarettes, then the use of the former is to be preferred, and (the economist would say) should be encouraged in order to secure the best economic results. From this point of view goods may be divided into necessities, comforts and luxuries.

Necessaries.

An article, the consumption of which increases the productive efficiency of the consumer, and the deprivation of which materially decreases his efficiency, may be considered as a necessary. Some goods are so necessary for our livelihood, that not only our efficiency, but our very existence depends on them : deprivation of them means starvation. Cheap food, a little rice, a few yards of cheap cotton cloth and a mud cottage, seem to be all that are absolutely necessary for an average south Indian peasant. In order, however, that people should be healthy and strong and able to work hard, their food should be rich enough to impart the vitality that their tasks require. They should have clothes suited to their position in life, good sanitary dwellings, opportunities for medical treatment and for the education of their children. All workers should have food which provides them with nourishment, *e.g.*, handworkers with that which strengthen the muscles. Such things are called the necessities of efficiency.

There are certain things which may not add to a man's efficiency and yet their consumption is considered so essential by him that if he were deprived of them his efficiency would be reduced very considerably. It may be that the consumption of the particular thing has simply grown

into a habit with him, or that it is regarded as essential by the customs of the class of the community to which he belongs. Thus a man who is addicted to smoking may feel sleepy if he does not get his *hugqa*, a certain amount of expenditure on ceremonies is regarded as so necessary by the rules of the castes, or *baradaries*, among Hindus that a member of that community may feel very "small" in his own estimation, and in that of his friends, if he cannot afford to follow the usual practice. These may be called *conventional* necessities.

Comforts.

Comforts are those which add something to the efficiency of a labourer but to a lesser degree than their cost. They add something to productive power but they must be distinguished from the necessities of efficiency ; *e.g.*, an electric fan, or silk suits in summer ; may be comforts for lawyers, professors or merchants, a clerk getting thirty rupees a month who goes to office in a bus may be able to save some time and it may also be comfort for him. Such things add to efficiency but perhaps not so much as their cost.

It is very easy to keep body and soul together by taking rough and simple food, but a man cannot become thoroughly efficient unless he eats something more than this : *e.g.*, if *ghee* and milk are added they are likely to make a man more efficient. The people of a country as a whole should be able to procure not only the necessary things for efficiency but also comforts and some luxuries. A nation whose people are deprived of comforts is in a disadvantageous position in competing with others in efficiency and so comforts must be supplied in some measure, to all in the interest of the welfare of the country.

Luxuries.

If a labourer in the fields wears silk suits, or a blacksmith at his work wears ties and collars, or a clerk goes to office in a taxi, they are using things which are neither necessities nor comforts, but luxuries ; the "consumption" of such goods is not necessary, it does not add to efficiency. If the above mentioned people were deprived of such things they would not reduce, but might improve, their efficiency. Consumption of harmful luxuries may detract from a man's efficiency and this can generally be regarded as misdirected and wasteful consumption.

It is argued, that, so long as there are workmen who cannot get even the bare necessities of life, people have no right to spend money on comforts, and still less on luxuries ; that the productive effort which goes to produce articles of luxury would be better spent in producing necessities for the poor. This might secure more justice but, it may be argued, that, if a rich man were not given the choice to spend his money as he liked, and his superfluous wealth were taken away from him to be distributed among the poor, then he might cease to work hard, not caring to earn more than was necessary for him. Luxuries may serve as an incentive to hard work and saving. So, the difference between necessities, comforts and luxuries is only relative : what is a luxury for one person may be a necessity for another. A motor-car may be necessary for a busy doctor going round to see his patients but will be a luxury for a clerk for his journey each day to the office. Higher education may be necessary for certain professions but is a luxury for labourers. Further what is luxury at one time may be a necessity at another. Sugar and kerosene oil were regarded as articles of luxury in Indian villages only about a generation ago, but now they are becoming articles of everyday use. On the

other hand, *ghee* and milk, which were the necessities of the past are becoming the luxuries of to-day.

Standard of Living.

We have studied the inter-relation between demands, and we know that a man's demand for goods does not necessarily depend on his own tastes and liking alone; he often insists on getting things which he is accustomed to using and consuming according to his habits, circumstances, education, taste and environment. A young man leaving a school and joining a college in a university town, often thinks he must live according to a certain standard of life and will insist on a particular kind of diet, a number of fashionable suits, a tennis racket or hockey stick, shoes, books, perhaps a few cinema "shows" a month, or a bicycle. Having got used to these particular comforts, when he leaves the college he attempts to live up to that standard (or a higher, if possible) as it would be unpleasant for him to forego such things. We usually come to regard a certain amount of expenditure, or a particular scale of living, or a certain standard of necessities, comforts and luxuries as indispensable to us: *e. g.*, a man may prefer not to marry rather than reduce his standard of living. The scale of comforts and necessities which he thinks indispensable to maintain his health and happiness may make a man undergo the required sacrifice, *e. g.*, he may marry late, or work for long hours, and this desire to keep up a certain standard is a great force in production. A man's standard of living is not therefore a question of individual or personal concern entirely, but is a matter of great social importance; it has considerable influence on the industrial efficiency of a country and on the progress and development of the people as a whole.

To find out the real prosperity or otherwise of a nation, a study of the private budgets of representative families,

having different standards of living, is necessary. A student will do well to investigate for himself the conditions of some families in his neighbourhood and on the results of his inquiry, prepare the actual budgets of such families. These will probably reveal to him some interesting and instructive facts. One of the first to adopt this method of study was the German, Engels, living in England, in the middle of the nineteenth century. After a careful study of the family budgets of different classes of people he laid down the following important propositions* about consumption :—

1. The less the income of a family the greater will be the proportion spent on food.

2. Percentages of expenses incurred on clothing, rent, light and fuel are very nearly the same in all cases.

3. The greater the income, the higher the proportion spent on education, health and luxuries.

4. The higher the income, the more diversified is the expenditure.

No attempt has been made to classify the people of India into well-marked groups for the purposes of such a study. The late Major Jack of Bengal was perhaps the first man to publish the result of a study of the income and expenditure of the inhabitants of a village. Dr. Harold Mann studied the condition of some villages in the Deccan and various people have recently studied the conditions of many villages in the Punjab;† but generalization about

* These are sometimes called Engel's Laws of Consumption or Laws of Family Expenditure.

† "Family Budgets," a publication of the Punjab Board of Economic Enquiry, shows that domestic expenditure per adult male unit in Lyallpur District (Punjab) in 1936-37 was Rs. 75 01. The main item of expenditure were food (59 per cent.), dress (18 per cent.), travelling (5 per cent.), religion (3 per cent.), social (1 per cent.), medical (2 per cent.), light (1 per cent.), amusements and luxuries (2 per cent.), education (1 per cent.), housing (1 per cent.), and miscellaneous (3 per cent.). Of the food, wheat accounted for 37 per cent, milk and milk products 42 per cent., sugar 8 per cent., rice 2 per cent., meat 1 per cent., pulses 1 per cent., vegetables 2 per cent., fruit 2 per cent., maize 1 per cent., salt 0.4 per cent., and miscellaneous 4 per cent.

standards of living in India must be made with great caution. The more closely the subject is studied the more will be realised that there is not one, but many, standards of living in this vast country inhabited by people of different classes, races, and religions. India is predominantly an agricultural country and conditions of life in rural India are very different from those obtaining in urban areas. Statistics of consumption in towns throw little light on the life of villages.

The life of an Indian cultivator is of a simple kind. In the northern and central part of the country bread made from *bajra*, *jowar*, or wheat, in some cases accompanied by small quantities of vegetables and pulses, forms the usual meal; in East and South India rice is substituted for *bajra*.

* The Bombay Labour Office has carried out two family budget inquiries for working classes in Bombay City, the results of which were published in 1923 and 1935 respectively. Similar inquiries have also been conducted in Ahmadabad, Sholapur, Nagpur, Jubbulpur and Rangoor. The figures as given below are not strictly comparative owing to difference in the items included in the different groups, but they nevertheless serve to show the variations in the distribution of expenditure in a general way.

Percentage Distribution of Expenditure.

Groups	Bombay 1932-33	Ahmad- abad 1935-36	Sholapur 1925	Nagpur 1927	Jubbul- pur 1927	Rangoor 1928
Food	46.60	49.31	49.25	64.10	66.00	52.7
Fuel & light	7.11	6.65	9.60	9.62	7.95	5.2
Clothing	7.73	9.12	11.86	10.70	10.86	10.6
House-rent	12.81	10.97	6.27	1.92	1.44	13.9
Misc.	25.73	23.95	23.02	13.66	13.76	17.6
Total ...	100.00	100.00	100.00	100.00	100.00	100.00

jawar and wheat. The food is mostly prepared from inferior kinds of food grains, with little or no *ghee*, and is, in many cases, insufficient in quantity and very deficient in nourishment. Clothing is rough and cheap and the houses have mud walls with thatched roofs. A few trinkets and holiday clothes constitute all the luxuries known to the people. Poverty and need are evident on all sides among the village people of rural India. The Indian villager is underfed, ill-clothed and improperly and unhealthily housed. Few of the poor possess land of their own and rural labourers hardly make a living wage for their very low standard of living; live stock and poultry are generally poor in breed, poorly kept, unproductive and often a positive loss; agricultural implements and cultivation methods are exceedingly primitive; certain religious and social customs and uneconomic traditions definitely accentuate the distress of the country and retard its rise out of its poverty; health conditions give Indians the lowest expectancy of life of any people in the world—less than 25 years—and education reaches only a small percentage of the people. The standard of living of the vast majority of the Indian cultivators is extremely low; almost all their income is spent on the bare necessities of life, but with the growth of economic prosperity and the contact of India with the rest of the world, the standard of living shows some signs of general improvement. The fact that the standard of living of an average Indian worker is much lower than that of the workers of the advanced industrial countries may be seen from the fact that Indian labourers who have migrated to such countries are generally content with lower wages than the native workers. This leads to what is thought to be unfair competition and for this reason some countries have enacted laws prohibiting the immigration and settling of unskilled Indian labourers in those countries.

expenditure was incurred on the following items, and in the proportion given below :

	Per cent.
Food	50
Clothing	9
Fuel and Lighting ...	6
House rent	4
Miscellaneous	6
	<hr/>
Total	75
	<hr/>

The remaining fourth is spent on education, marriages, travelling, religious ceremonies and payment of debt and interest. The Department of Industries under the auspices of the Board of Economic Inquiry publishes monthly in the Punjab Government Gazettes the cost of living index numbers of urban working classes for five centres, Lahore, Multan, Ludhiana, Sialkot and Rohtak. The average prices of the quinquennium ending 31st December 1935 have been taken as the base period and the progressive indices are worked out for subsequent periods. The following weights have been assigned after ascertaining the importance of various items under different groups at different stations.

1. Food Articles :

	Sialkot	Ludhiana	Rohtak	Lahore	Multan
Rice ...	13	3	10	10	15
Wheat and atta	40	30	30	45	41
Maize ...	8	15	8	5	5
Jowar ...	3	8	4	4	3
Bajra ...	5	13	17	5	5
Gram ...	4	4	5	4	3
Arhar ...	0	1	3	2	0
Masar ...	7	1	2	2	2
Urd ...	2	4	3	5	4
Mung ...	2	5	2	2	6
Gur ...	2	2	2	2	2
Sugar ...	1	1	1	1	1
Salt ...	1	1	1	1	1
Meat ...	2	2	2	2	2
Milk ...	4	4	4	4	4
Onions ...	1	1	1	1	1
Chillies ...	1	1	1	1	1
Ghee ...	4	4	4	4	4
Total	100	100	100	100	100

2. Fuel and Lighting :

Fire wood	...	83
Coal	...	2
Kerosine oil	...	23
Matches	...	2
Total	...	100

3. Clothing :

Chaddar	...	20
Dhoti	...	20
Blanket	...	6
Shirting	...	25
Long cloth	...	15
Muslin	...	14
Total	...	100

4. **House rent :** ... 100

5. **Miscellaneous.**

Cigarettes	...	17
Tobacco	...	60
Soap	...	15
Oil	...	8
		<hr/>
Total	...	100
		<hr/>

The Director of Land Records, Punjab issues a fortnightly statement showing the retail prices of food grains and salt, etc., in different mandis. Students may make similar attempts to collect prices and work out indices on the lines of the tables shown below.

Methods of Working Index Numbers : Table 1 shows the retail monthly prices of articles consumed by people in Lahore. The Base price is the average of 5 years. Table 2 shows index numbers of individual articles which are obtained by simple arithmetical calculations. Then by multiplying the index of each item by the weight and dividing the total by 100 group index numbers are obtained. The general index is calculated by multiplying the group index by the proportionate percentage expenditure under each group and dividing the total by 75. Table 3 shows cost of living index numbers at a number of places in India and also abroad.

Rural.

The Board of Economic Inquiry also keeps systematic records of articles consumed by a number of zamindar families at several places. By the application of Atwater's scale of Adult Male Units* the expenditure per male unit in the rural areas is worked out. The following table shows expenditure per adult male unit as ascertained by the observation of expenditure of a number of families in a village in Lyallpur District

Expenditure per Adult Male unit.

	1932-3	1933-4	1934-5	1935-6	1936-7	1937-5	Per cent. age.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Food ...	45'92	52'69	40'61	45'21	43'82	43'67	65
Dress ...	14'76	12'72	11'31	15'49	13'37	0'26	...
Housing ...	0'40	0'25	0'50	0'21	0'50	0'71	...
Lighting ...	0'93	0'93	0'64	0'72	0'74	1'46	1
Medicines ...	0'71	0'78	1'29	1'25	1'13	2'76	2
Travelling ...	4'25	4'56	2'59	4'58	3'51	0'02	4
Education ...	0'10	0'21	0'07	0'35	0'52	2'03	10
Religion ...	1'02	1'90	1'58	3'9	2'33	1'05	3
Social ...	0'80	1'52	0'94	2'16	0'66	1'38	2
Amusements ...	1'16	0'64	1'15	1'29	1'15	—	2
Miscellaneous ...	1'33	1'43	1'73	1'75	2'37	0'05	...
Fuel ...	...	...	...	...	2'88	4'46	7
Total ...	71'38	77'61	62'48	76'05	73'68	67'61	100

Food is the most important item and more than half of the total expenditure was incurred under this heading. The following table shows the weight and value of various articles of food consumed by the villagers.

*Atwater's scale of Adult Male units.

Age in years.	Equivalent Adult Male units.	
	Male	Female.
Adult over 16	1'0	0'8
15 to 16	0'9	0'8
13 to 14	0'8	0'7
12	0'7	0'6
10 to 11	0'6	0'6
6 to 9	0'5	0'5
0 to 5	0'4	0'4

Details of Expenditure per Adult Male unit on Food.

Articles of Food.	Quantity.	Value. Rs.	Percentage.
1. Wheat ...	5'41 mds.	17'71	41
2. Maize ...	0 4 srs.	0'03	...
3. Milk ...	7'69 mds.	17'15	39
4. Sugar ...	21 5 srs.	2'57	6
5. Rice ...	6'8 srs.	0'84	2
6. Meat ...	1'3 srs.	0'51	1
7. Pulses ...	4 2 srs.	0'39	1
8. Vegetables ...	...	1'29	3
9. Fruits ...	...	0'84	2
10. Salt ...	2'7 srs.	0'17	...
11. Miscellaneous ...	...	2'17	5
Total		43 67	100

SUMMARY

The economist is concerned with general welfare as shown in the quality and quantity of the things consumed by a people.

Goods may be (a) necessities, if their consumption increases efficiency by more than their cost; (b) comforts, if they add to efficiency, but in a lesser amount than their cost; (c) luxuries, if they neither add to, nor detract from, efficiency.

"Necessaries" may be essential for existence, or for efficiency, or they may be simply conventional necessities. Few people will deny that every member of a community must be provided with necessities and even with some comforts.

People, however, condemn the consumption of luxuries on the following grounds:—

(1) That all expenditure on them is 'wasteful, and encouragement of the use of such articles diverts the productive resources of a nation.

(2) No one has a right to spend lavishly so long as there are any people who do not get even the bare necessities of life.

On the other hand it is argued that a certain amount of expenditure on luxuries is justified on the ground that their consumption acts as a very strong stimulus to production and provides a motive for saving; that if each one has not the right to spend his money in whatever way he chooses, then there would be less incentive to production and hence little progress. Luxuries are said to provide an incentive to economic progress.

A certain amount of necessities, comforts and luxuries, may be desirable for a particular class of people who are so accustomed to their consumption that they have come to regard that scale of living as indispensable for them. This is called the standard of living for that class. For an average Indian cultivator the standard is very low and this reacts most unfavourably on the productive efficiency of the people.

Engels studied the consumption of different classes of people in England and discovered that (a) most of the expenditure of the poorer classes is on food; (b) the percentage of expenditure on clothing is about the same in all classes; (c) the expenses on education, health, and luxuries increase as incomes rise.

Questions and Exercises.

1. Select an Indian village and prepare the budgets of a dozen different families; as far as possible select representative families from all classes of the people. From a study of these budgets give average annual income of a cultivator, his wealth, the value of his capital, extent of debt, average savings, and the percentage of expenditure on food, clothing, education, ceremonies, tobacco, travel, comforts and luxuries.

2. Prepare the budgets of a (a) cook, (b) sweeper, (c) clerk, (d) shopkeeper, (e) barber and (f) a carpenter, in your town or village.

3. What is a Standard of Living? How does it differ from a Standard of Life?

4. Indian labourers are not permitted to settle in some countries on the ground that their standard of living is low? How can you justify this inhibition? What are the arguments against this practice?

5. (a) 'What is a necessary for one may be a luxury for another,' (b) 'Necessaries for all before luxuries for a few,' (c) 'The necessities of

the past have become the luxuries of to-day and the luxuries of the past have become the necessities of to-day.' (d) 'All expenditure on non-necessaries is waste.' Explain and discuss these statements.

6. How do you differentiate between (a) things necessary for efficiency, and (b) comforts? What are conventional necessities? Give examples of such consumed by village folk in India.

7. What are Engels' laws? What is the connection between these and the Law of Diminishing Utility? Do they apply to India?

8. Why is the standard of living of an Indian worker so low? What is its effect on (a) the population of the country; (b) happiness of the workers; (c) production of wealth; (d) wages of the workers; (e) character of the people; and (f) capital of the country?

9. Draw a rough sketch of your family budget. Which of the items in the budget will you class as necessities, comforts and luxuries and why? Redraw your budget pointing out the variation in the amount spent on various items assuming a 10 per cent cut in the income. (P. U. 1934)

10. Clearly distinguish between necessities, comforts, and luxuries and enunciate the principles that should govern an expenditure on them. (P. U. 1936)

SECTION II
SUPPLY OR PRODUCTION
CHAPTER VII
PRODUCTION

Production—Ordinary Use of the Term.

In common speech we use the word production in a rather loose way. Sometimes we speak only of the people who are engaged in the extractive industries such as farmers, miners, and quarrymen, as producers, at other times, we include also artisans and manufacturers. Again we speak of an agriculturist producing wheat, of a tailor making clothes, of a cobbler making shoes. We frequently leave clerks, traders, transport workers and bankers out of the category of producers, as well as lawyers, musicians, actors and similar professional people. The common use of the word production is defective; it is far too vague from a scientific point of view. It does not give an adequate idea of the exact nature of production. Is it the creation of new matter? Is it the making of something material? Does a tailor really make clothes, or a farmer create wheat, or a miner make coal or gold? The exact scope of production is not defined. Does it include those services which produce material wealth, or the work of traders, or the services of lawyers and soldiers?

Production in Economics.

To understand exactly the nature of production we must bear in mind an important fact which is often overlooked, *viz.*, that man cannot create new matter; probably he can create nothing new except ideas. Neither the farmer nor the artisan can add one atom to the existing material of the earth, yet they are called producers because

they increase our supply of economic utilities. Production means the creation of utility by the application of physical and mental powers to nature. Man's work consists not in creating new matter, but in so fashioning, shaping, altering, preserving, and transporting matter as to make undesirable things desirable, or less desirable things more desirable.

The act of production can be reduced then to the following operations : (a) changing the form of things ; (b) changing their places ; and (c) retaining them until such time as they are wanted. In other words, production adds form, time or place utilities to the materials of nature. The farmer who grows cotton, the worker in the ginning factory, the cloth weaver, the transport worker and the merchant who employs them, are all producers.

Industrial Occupations.

According to the above definition of production a farmer, a blacksmith, a cart driver, a *bania*, a doctor and a lawyer are all equally producers. There are, however, distinct differences in the nature of the work performed by each and we may divide industrial processes into the following separate industries :—

(i) *Extractive**—in which raw materials are extracted from nature, *i.e.*, from the earth, the sea, and the air, *e.g.*, farming, rubber-growing, mining, fishing, obtaining gases from the atmosphere and power from the wind.

(ii) *Manufacturing*—the making or changing raw materials and some partly-manufactured goods into finished commodities, *e.g.*, weaving, lacquer and glass work, pottery, etc.

(iii) *Transport*—railways, ships, motors and trams with the clerical, managerial and manual occupations necessarily involved in such undertakings.

*Professor Carver calls these the *primary* industries and all other classes *secondary* industries.

(iv) *Distributive*—the functions of those who arrange, for the distribution of the goods, (as distinct from their transport), among those who desire them e.g., commercial travellers, commission agents, advertising experts and shop-keepers.

(v) *Banking and Insurance*—Services of this kind increase the efficiency of production and make possible the growth and development of commerce and industry on an extensive scale. There is usually a long interval between the first stages of production and the time when an article finds its way finally to the consumer who destroys its utility. During this time all production has to be financed, e.g., the Punjab cotton grower cannot wait for the cash on his cotton crop until the Bengal or Japanese peasant buys a *dhoti* made from the cotton; and even before the cotton was grown the agriculturist required seeds and numerous other things for his use. Someone has to finance production, i.e., bankers are necessary, and, also in order to avoid the big risks involved, insurance is desirable.

(vi) *Direct Services to Consumers and Public Services*—Under these are included the services of the doctor, teacher, lawyer, and domestic servant; the work of civil servants, local government officials and policemen.

Agents of Production—LAND AND LABOUR.

Land and Labour are the two primary factors of production. How much a nation can produce will depend primarily upon these two things. First, upon its physical and geographical position; that is, how rich is its land in plants, food, minerals, forests and power; how favourable is its climate, and how well it is situated for trade and transport. Secondly, upon its people; that is, upon how energetic, how wise and how well-trained they are; in other words, how they are able, and willing to make use of their natural resources.

Capital.

Then there is a third factor. Nature and man, or land, and labour, are the two fundamental agents of production yet with these alone man cannot progress very far. We cannot look back to any time in history when man had not some tools or implements to aid him in the work of production. This history of human progress has, in fact, been written in terms of the kind of tools used by the people. In an archæological museum one may see the rough stone implements of the earliest Aryans ; the men who lived in what is called the Stone Age. Later, implements made of bronze and iron replaced those of stone. Without the aid of tools man can produce but little ; how much grass can a *mali* cut in a day without a reaping hook ? How much grain can a field labourer reap in a day, without a sickle ? How many fish can a man catch daily without a net or line ? Further, by how much would the output of a man increase if the reaping hook were replaced by a grass-cutting machine, the sickle by a harvesting machine, and the sharp-edged stick by a well-woven net ?

For all these things man had to wait. He had first to make the tools and the machines, and in order to make these he had to postpone his immediate consumption. If the man cutting the grass spends all the income from his day's work on food, clothes, and tobacco, he will have nothing left with which to purchase the reaping hook. But if he saves one pice a day from his tobacco, at the end of sixteen days he has the four annas necessary to purchase a hook. His foresight and saving enable him to increase his production and capacity for output and also his enjoyment of life. Machines and implements are a form of wealth, which can be utilized to produce further wealth ; the economists call them Capital, and this is the third factor in production.

PRODUCTION

Organization.

We have now to consider a fourth factor in production, *i. e.*, Organization, or Enterprise. It is a matter of everyday observation that wealth is not produced by each family for its own needs, but that production is usually undertaken for a market. The cotton grown in a village may not be used entirely in that place but sold in a *mandi* and from thence be carried to a factory, probably in some far-off place. The factory is most likely a large industrial undertaking, which requires much capital and many men to organize and control it. The producer of cloth may not perform a single operation himself, but he seeks to supply the wants of people in many lands, far and near; he takes the risks of production and controls and organizes its machinery. Business organization and enterprise thus appear as a distinct and independent factor of production.

Efficiency of the Agents of Production

To satisfy the increasing wants of growing populations we must have additional production and be able to get things more cheaply. One of the fundamental requirements of abundant production is that the factors in it must be efficient, *viz.*, have the ability to achieve much, with comparatively little effort. All the factors of production can be developed and improved; even land can be made more efficient. Any discovery of science which makes natural resources supply the wants of man more bounteously is an improvement, as it is an increase in the efficiency of the land factor. Labour improves by means of proper training and suitable education, as well as by sound and healthy growth in numbers. Capital is increased by whatever conduces to a greater volume of savings and their judicious use; it is also improved by the application of inventive ability to create better tools, improved machines and less wasteful methods of production. The main cause of growth in its efficiency is the birth of new ideas and the adoption

of new devices for the better utilization of what nature has put at man's disposal; this growth is also dependent on education. The factor of management, like that of labour, is capable of indefinite improvement by conscious training. In most respects it resembles labour, but for clarity of discussion it is better to consider it separately and in the following chapters the conditions necessary for the growth and efficiency of each factor will be discussed.

SUMMARY

Production as ordinarily understood means the creation of new matter, but scientifically examined, no producer, not even the farmer can create matter. Production in Economics means the creation of utilities by the application of man's physical and mental powers to nature.

The processes of production are various and may be divided into the following industrial occupations :—

- (a) Extractive.
- (b) Manufacturing.
- (c) Transport.
- (d) Distributive.
- (e) Banking and Insurance.
- (f) Direct Services to Consumers.
- (g) Public Services.

The Agents of production are :—

(a) Land ; (b) Labour ; (c) Capital ; and (d) Organization. Man and Nature are the two fundamental agents. Capital, though a derived factor, has always played an important part in production. Organization has grown in importance since production has been done for a large market in which there is risk and responsibility, in the planning and organization of the other factors of production.

The wealth of a nation depends on the efficiency of these factors, which can be improved.

Questions and Exercises

1. What is capital ? Is it productive ?
2. What is meant by saying that land and capital are the factors of production, while labour is the only agent of production.
3. Estimate the relative importance of man and nature in production, with special reference to Indian conditions. Which of the two do you regard as more fundamental and why ? (P. U. 1937.)
4. Examine the view that capital is not an independent factor of production.
5. Are the following workers producers ?—Musician, thief, station master, coolie, carpenter, painter, student, a student who amuses his fellow students by playing upon his flute, manufacturer of liquor, quack physician, lawyer, a clever thug.
6. What is the basis of the Indian caste system ? In what ways is the modern division of society into occupations different from the caste system ?

✓ CHAPTER VIII

LAND—THE PHYSICAL BASIS OF PRODUCTION

What is Land ?

The term Land, as used in Economics, is not used to indicate merely the surface of the ground, but it includes all the materials and forces which nature provides freely for man's aid on land, in water and air ; e.g., light, heat and energy. It includes all the things which are the free gifts of nature and which cannot be created by man at will as their supply, quality as well as quantity is absolutely fixed by nature.

Land in this wide sense is the basic item in the wealth of a nation. The Himalayas with their immense forest products, fine grandeur and beautiful scenery, and potential sources of water power are no small item in the wealth of India. The distinguishing feature of land from all other things is that the latter can be increased or decreased almost at will; this is not possible with the supply of land. The timber cut from the forests is wealth, but it is not the same kind of wealth as land, because the supply can be, to some extent, adjusted to our needs, but the length of the Himalayas cannot be increased. There is little outward difference between the bricks that are prepared from the clay soil dug from the land, and the land itself from which they are obtained ; to an economist, however, the difference is great. We can increase the supply of bricks according to the demand, but we cannot add one cubic inch to the existing supply of land in the country except a little by reclamation. Land is not the product of man's activity but is nature's product ; it is the part which nature plays in production.

Man and Nature in Production.

Man is the active, and nature the passive agent in production. A nation's geographical situation cannot be

changed but the habits of the people may be altered. By reason of their energy and wisdom, some nations have grown rich and great in the midst of very poor natural surroundings, others have grown poor in the midst of a rich environment for lack of the necessary foresight and activity. "It is man who harnesses air and water and electricity to drive his machines. He entraps the warmth of the sun to meet his physical needs and make possible his industry; from the soil he draws forth its nutriment in the form of food and raw material, nature's vast storehouse provides minerals for his furnaces, and jewels to please his eyes, while on the surface of land and sea, even indeed in the air, also, nature provides space whereon and in which he may live and work, directing her forces to minister to his need and to satisfy his pleasure." *

People in countries such as some parts of Scotland, find themselves in the midst of dreary surroundings; the land is craggy moorland, or bog, barren of crops, and hardly able to supply food for a few sheep, yet the people of that country are better fed and clothed than the people even in those districts in India where the soils have long been noted for their fertility. The people of Britain have made good use of their broken coast line, and of their coal and iron deposits. By their energy, initiative and co-operation with the people of other lands they have secured the food products which their land did not provide. Denmark with its infertile soil and practically no mineral resources, was one of the poorest countries in the world at one time, but now she is one of the richest lands; her butter, cheese, eggs, poultry and other animal products are highly valued. Much of this is due to the introduction of co-operative societies and the system of education, but these things would have been of little use, or may have been started

* "Elements of Economics" by S. E. Thomas.

had it not been for the energy and initiative of the people.
Effect of Nature on Production.

In spite of this we must remember, however, that land is the base on which any industrial system is constructed ; natural constituents play an important role in national production.

1. **RELIEF.** This has been said to be "the geographer's starting point."* This is to a large extent true and especially of that branch of geography with which we are concerned, viz., its relation to Economics. The relief of the land, i.e., whether hilly or flat, mountains or plains, is important, as this to a large extent determines the kind of climate, which in turn determines the kind and quantity of the vegetation by which all live. The surface features, such as mountains, valleys, rivers, plains and forests, tend to determine the economic life of the people of a country. The Himalayas not only provide forests, animals, scenery, rain, sources of rivers, and water power for Northern India but also protect the plains from the dry, cold winds of Tibet ; their slopes provide facilities for irrigation ; and they shut off India from the world for a long time. The plains make possible easy and rapid means of communication. Their vastness and the height of the mountains in India have imbued the people with an awe of nature and tended to make them unduly dependent on its forces ; their genius has been turned inwards and made them philosophic in thought and temperament. On the other hand, the smallness of their country has helped to make the British people practical in action and scientific in outlook. Natural and physical handicaps have taught them to contend against the forces of nature and to obtain a mastery over them.

2. **CLIMATE.** This has a very great influence on vegetation. All of us have to live on the products of the soil—animals as well as men ; hence the importance of

* "Modern Geography," by Dr. Marion Newbiggin.

vegetation ; on it depends not only our very existence but also the efficiency of labour. Tropical countries have generally a luxuriant vegetation, but their people are not usually active and energetic ; on the other hand, in the countries of the temperate zone and other regions where nature is not very bountiful, the human factor is usually more virile and enterprising. It is not an accident that the most productive and prosperous peoples in the world to-day are to be found in the North Temperate Zone where the climate is favourable to energy and activity for most of the year. The vegetable products of a country depend upon its climate ; and it follows then that the animal products are also conditioned by the climate, since the animals in turn are largely dependent on the kind of food they are able to obtain. Little can be grown in hot deserts except dates, or anything at all in the tundras of the extreme north, except mosses and lichens. Climate also influences industrial products and each region has its distinctive products : *e.g.*, the cotton industry has prospered in Bombay partly because of the moist climate ; the cinema film industry requires a clear sky, good weather and beautiful scenery, and hence it has flourished in California, where these climatic conditions prevail. Climate influences the character as well as the occupations of a people ; an Eskimo living in icy regions cannot be a farmer, but he can be a hunter and a fisherman ; the Indian with his vast plains and hot sun will be primarily an agriculturist.

2. THE RAINFALL. Rainfall is chiefly dependent on the land relief, and its effects are most easily noticeable in a country such as India where the fate of the agriculturists still depends on the Monsoon : a failure of which in any year brings famine. The harvests—the *Kharif* and the *Rabi*—correspond with the two periodical visits of the Monsoons and the finances of the country are so intimately

bound up with the success or failure of the crops, that the Indian Budget has been called a "gamble in rain." Though man can provide against scarcity of rain by irrigation, and can even regulate and increase the supply of rain by afforestation, yet even these depend upon natural facilities. Canals cannot be built in an undulating country, nor forests planted in a rainless desert

4. **SOIL.** The vegetation of a country also depends upon the richness and fertility of the soil. Different crops require varied soils, the properties of which have been regarded generally as natural and indestructible. Scientific progress, however, has shown us that man can prepare the soil chemically, mechanically and biologically, for whatever crop he intends to grow. Mechanically, the soil must be so far yielding that the fine roots of plants can make their way freely into the earth, and yet it must be firm enough to give them a good hold. Soil must have inorganic elements such as oxygen and silicon which plants can easily assimilate. Biologically the soil requires bacteria, which, by their action on the air and soil, prepare nitrates and phosphoric acid, which are very important plant foods. Some areas in Germany which were formerly barren have become splendid agricultural lands through a supply of artificial bacteria. Though man can do so much he cannot alter the space relations of the soil; he cannot carry the desert soil of Rajputana and fix it in a rainy area in Bengal; there are limitations to man's efforts to improve the soil.

5. **COAST LINE.** As has just been suggested, the coast line of the British Isles has helped to make its people a seafaring race and thus to obtain supremacy in the commerce of the world, and especially in the international transport of goods. On the other hand, the regular coast-line of India and the deficiency of good harbours has been

a great handicap in the development of the trade of the country. The lack of natural harbours has, however, been to some extent overcome by the construction of artificial harbours such as the one at Vizagapatam, but works of that kind require huge amounts of capital, and the necessary expense is tremendous compared with those countries where natural harbours are available at little cost.

6. SITUATION. The position of a country relatively to other countries greatly affects its commercial possibilities. India holds an important position on the main route from Europe to the Far-East and it has also a central situation in the Europe-Asia land mass. The construction of the Suez Canal opened up vast opportunities for trade and commerce between the Eastern and Western countries. It also brought India much nearer to all the countries of Europe.

Conclusion.

In a modern industrialized country there is a tendency to under-rate the part played by land in production. The primary position of nature is apt to be forgotten, but it must be borne in mind that even in the most advanced countries, nature furnishes man with materials and power. In England, though trade and manufacture predominate, these depend on the proximity of coal and iron, the indented character of the coast, the presence of navigable rivers, a temperate climate affecting the efficiency of labour, the moisture of the air and fertility of the soil, as well as on the country's position in the centre of the world, on a great ocean route and near the continent of Europe. In India there seems to be, on the part of the people, an unmistakable tendency to exaggerate the influence of natural conditions. Having heard of imaginary descriptions of the fabulous wealth of India people are apt to over-estimate the natural resources of the country. No doubt India has rich, extensive, fertile plains, a variety of climate and vegetation, inexhausti-

ble sources of water power, a fair stock of mineral resources, and huge forests. But it should not be forgotten that the supply of coal in the country is not only relatively small, but is also of poor quality, the coast line is generally regular, most rivers are not navigable and the climate in many parts is not very favourable for vegetation. Nor should we exaggerate the good influence of climate and the bounty of nature on labour; they may tend to make people inactive and lacking in energy, although training, education and discipline may overcome these defects.

SUMMARY

The term Land in Economics means not only the surface of the ground but all the materials and forces which nature gives freely for man's aid. The distinguishing feature of land from other goods is that its supply is absolutely fixed by nature; man cannot increase it at will.

Nature's part in production is fundamental. Although it is the passive, and man the active agent, no production is possible without land, and the physical features of a country have an important bearing on its production, its industries, and the occupation of the people.

1. Relief affects climate and therefore the trade and industries; it also influences the outlook of the people.
2. Climate not only determines the vegetation of a country, but also to a large degree, its industries. It has also a great influence on the character and efficiency of the people.
3. Rainfall has a great influence on the prosperity or otherwise of agricultural countries.
4. Soils largely determine the kind of a nation's products.
5. Coast line is of much importance in the development of maritime pursuits.
6. Situation, relatively to other countries, affects a country's trade.

Many natural obstacles can be overcome by scientific progress, education, training and discipline, but the natural resources of a country have generally a determining influence on its trade, commerce and industries.

Questions and Exercises.

1. What is the staple food of the people of (a) the Punjab, (b) Bengal, (c) Madras, (d) Scotland, (e) Tibet? Give reasons in each case.
2. Why are there more cotton mills in Bombay than in Calcutta and more jute mills in Calcutta than in Bombay?

3. Why are there not many sailors among Indians ?
4. Name the harbours of India. Is it possible to create new harbours ? Describe any such project of which you have read.
5. How do the people of Scotland get their wheat when their land does not produce it ?
6. What is the best climate and soil for the production of wool ? Where do you find such soils and climate in India ?
7. What is the main occupation of the people of India and why ?
8. What is land ? How does it differ from other factors of production and other forms of wealth ?
9. Is land wealth ? How do you find its value ?
10. How can you improve the quality of soils ?
11. Has any remedy been found to combat the vagaries of Monsoon in India ?
12. How does rainfall affect the trade of India ?
13. What is a famine ? How is it caused ? Can you suggest any remedies ?
14. Is it true that the Indian labourer cannot work as hard as a European worker ? Give reasons for your answer.
15. What is civilization ? In what way have the physical features of India given rise to a different civilization from that of the European countries ?
16. Is man or nature more important in production ?
17. Show the importance of scientific progress on the efficiency of the natural factors in production.
18. What would be the effect on the economic life of India of the following :—
 - (a) Non-existence of the Himalayas.
 - (b) Shutting up the Suez Canal.
 - (c) Building of a continental railway line from Turkey to Afghanistan
 - (d) Destruction of forests in the country.
 - (e) Use of more hydro-electric power.
 - (f) Greater development of aviation in India.

CHAPTER IX

MAIN FEATURES OF INDIAN GEOGRAPHY

The fundamental influence of physical features on the economic life of every country need not be laboured further; as has been stated, they largely determine the products of a country, the density and distribution of population and the occupations of the people. India is no exception to this general and fundamental fact.

Area and Population.

The first point to notice about India is the vastness of its area and the variety of its physical features. The country covers over 1,800,000 square miles; its length from north to south is 2,000 miles and from east to west 2,500 miles. It has a land frontier of approximately 6,000 miles and a coast line of 5,000 miles. This vast territory had a population of 353 millions in 1931 or about one-fifth of the whole human race.* The population of India exceeds that of Europe without Russia, and is nearly three times that of the United States of America; the United Provinces and associated States have as many inhabitants as the British Isles; Bengal and its associated States the same; Bihar and Orissa have as many as France, and the Punjab has the same number as Spain. For more than twenty centuries the Gangetic Plain has had a dense agricultural population and it now numbers about 125 million people, approximately the same as the United States. India contains people of many of the great races of mankind, who speak many distinct languages and profess a great variety of religious beliefs. With huge mountains,

* The figures are for India including Burma. Burma has been separated from India in April 1937 and is now a foreign country. The area of India excluding Burma is 1,576,000 square miles and the population was 338 millions in 1931.

extensive plains and wide table-lands, India has every kind of climate, and almost every variety of animal, vegetable and mineral product. Political divisions and subdivisions have been extremely numerous in the past and are still of great importance. There are many difficulties, therefore, in attempting to discuss as a whole the economic problems of so vast and varied an area as India. It forms, however, one of the most clearly marked geographical units in the world and a number of forces are at work which make it reasonable to suppose that India is an economic unit, at least in the making.

Location.

The country occupies a very favourable situation from an economic point of view as it stands almost at the centre of the Eastern hemisphere; trade routes radiate in all directions to Europe, Africa, Australia, China and Japan. Of late, plans have also been suggested to open connections with the through land routes of the Europe-Asiatic continent, but so far these have not materialised.

Land and Sea Boundaries. India is bounded on almost all sides by natural barriers. The high ranges of the Himalayas on the north, the Hindukush and Suleiman ranges on the north-west, cut it off from the rest of Asia. The sea boundaries are the Bay of Bengal on the east and the Arabian Sea on the west.

Coast line. As just mentioned, the coast line is about 5,000 miles long, but there is a marked deficiency of natural harbours. On the west coast almost the only harbours worth the name are Bombay, Karachi and Goa. The east coast is surf-ridden and the mouths of the rivers become easily choked with sand; there are no natural indentations. The construction of sea-walls at enormous expense has greatly improved the position of Madras as the only seaport of importance on that coast, and the construction of a new artificial harbour at Vizagapatam

has shown the possibilities of overcoming the difficulties arising from the absence of indentations. The project was first formulated by the Bengal Nagpur Railway Company, but the Government of India later decided to develop the place under its direct control and Vizagapatam has been declared to be a major port. The scheme for the construction and development of the harbour will be carried out by progressive stages according to the demands of trade, and the first stage has been completed. Ships started using the harbour in October, 1933, and the official opening by His Excellency the Viceroy took place on the 19th December, of the same year. At present, ships enter and leave the harbour at day time only and pilotage is compulsory, but the port supplies a much-needed outlet for the products of Bihar and Orissa, Central Provinces, Hyderabad State and the northern part of Madras Presidency. It exports cotton, hides, skins and tanning materials; it also affords a very good site for a naval station for the defence of the east coast of India.

Calcutta has a well-situated harbour but it requires constant dredging. Chittagong to the east of the Ganges and Brahmaputra, exports tea from Assam and jute from Eastern Bengal. Nearly six-sevenths of India's foreign trade is confined to the four ports of Calcutta, Bombay, Madras and Karachi.

Kathiawar and Travancore Ports.

The contrast of the trade of the Kathiawar ports, important of which are Bhavnagar, Nawnagar, Okha, Porbunder, and Vernal, from that of the Travancore ports of which Cochin, Alleppy, Quilon, Trivandrum, is well-known, and shows the following results. In the Kathiawar ports, imports are far greater than exports, while reverse is the case in Travancore ports. The chief imports in the Kathiawar ports are cotton and silk goods, metals and rails, sugar, paper,

machinery, hardwares and oil; the exports are seeds, raw cotton, raw wool, ground nut cake, and ground nut oil. The chief imports in Travancore ports are metals, iron and steel goods, machinery, tobacco, cotton-piece goods. The exports are coir mats, coir yarn, raw rubber, spices, oils and metals.

Shipping.

The position of shipping in India is far from satisfactory, as the carrying trade of the country is almost entirely in the hands of foreigners; there is practically no Indian mercantile marine; even the coastal traffic is mostly carried on by people of other countries. There would appear to be room for a vigorous policy of development, the construction of new harbours and improvement of old ones; encouragement also might be afforded to the construction of Indian ships. Some time ago a proposal was made in the Indian Legislative Assembly, that the coastal traffic of India should be open only to Indian vessels, but the bill was not passed.

Geographical Divisions of India.

Geographically, India is divided into four well-marked areas, each with distinctive characteristics in conditions and products:—

1. Northern Mountain Region.
2. Indo-Gangetic Plain.
3. Deccan, or the plateau of the South.
4. Coastal Strips.

Northern Mountain Region.

India is separated from the rest of Asia by the loftiest mountain ranges in the world—the Himalayas and their off-shoots. They consist of some parallel ranges, joined by cross-ridges, and contain almost every possible variety of climate, vegetation and population. They include lovely mountain valleys, glorious Alpine-like regions, and

permanently snow-clad peaks. The highest mountain in the world (Mount Everest, 29,002 feet) is in the Himalayas. The average height of the range is 19000 ft. and the total length 2,000 miles, of which 1,250 miles are the Himalayas proper. The north of the range forms the edge of the great tableland of Tibet; on the west offshoots are sent southwards, *e.g.*, the Hindukush, Suleiman Range and Kirther mountains, which separate India from the Great Iranian Tableland (Afghanistan, Baluchistan and Persia). There are several passes through these ranges, the chief being the Khyber, the Gomal and the Bolan. These are the only Passes through which Indian trade with Afghanistan can be carried on and thus their economic importance is immense. They are, however, a permanent source of expenditure to the government, which spends huge sums of money for fortification purposes and for maintaining the armed guards which are provided to afford protection for travellers to and from India. The Himalayas at their eastern extremity seem to be suddenly folded round and then to run south in parallel ridges; farther south, these ridges become twisted out of the parallel formation, form a continuous chain of rugged hills and tablelands, and then narrow into a single ridge right down the whole length of the Malaya Peninsula. Apart from their political significance as an impregnable wall, and their effect on the moral and religious life of the people, the Himalayas have the following economic advantages:—

1. They obstruct the south-west monsoons and so cause rain to fall; on this much of the prosperity of the country depends.

2. Many of the great rivers of India come from the Himalayas and endow the soil with high fertility, these rivers not only bring their water from the snows but also carry silt from the mountain sides.

3. An almost inexhaustible source of potential water power is furnished by them.

4. They provide a great variety of animal and vegetable products. Large areas of forests provide valuable supplies of timber (such as Deodar, Sal, Fir, and Blue Pine), raw material for gum, lac, resin and turpentine, as well as tanning materials. The resin factory at Jallo in the Punjab obtains supplies of raw material from the Himalayan area. Near the plains, food products, such as rice, maize and millets are grown, while, higher up the slopes, wheat and barley are cultivated. Tea is grown in Assam, Darjeeling, Dehra Dun and the Kangra Valley and fruit is grown in the drier and sunnier ranges, especially in Kashmir, Kulu Valley, Quetta and Peshawar.

5. The Himalayan forests exercise a regulating influence on the rivers and rainfall. They conserve rain water, prevent floods during the wet months and send the water down in the dry months.

6. The scenery and the excellent climate attract tourists from all over the world.

7. They protect the plains to the south from the dry cold winds of the Tibetan Plateau.

II. Indo-Gangetic Plain.

The great Indo-Gangetic Plain forms the major portion of the valleys of the Indus, Ganges and Brahmaputra and their tributaries; it stretches from the Arabian Sea on the west, to the Bay of Bengal in the east, and from the foot of the Himalayas in the north, to the Vindhyan range in the south. It covers more than one-third of the land surface of India (equal in area to France, Austria, Germany and Italy combined) and contains more than two-thirds of the population of the country. The whole of the region is alluvial *i.e.*, its soil consists of fine mud and sand, washed down by the rivers and spread on the low-lying land; such

soil is fertile and is renewed in part every year by floods. It is very fine and deep and the flat plain makes irrigation not only possible, but easy. As the rainfall is generally sufficient, periodic agriculture is carried on both extensively and intensively; all kinds of vegetation grow on these plains and the economic products are numerous. Sind is dry and palms grow easily in that semi-desert area. In the Punjab the vegetation is varied and plentiful, while the mulberry trees of Bengal are responsible for the silk industry of that province, although its chief crops are wheat, barley, rice, millets, cotton, jute, sugar-cane and oil seeds.

The Ganges is a river of great economic importance and may be considered as the national asset of India. It is held sacred by the Hindus, perhaps because, from time immemorial, it has been so useful to the people for irrigation and for bringing new soil every year. It is the main cause of the great fertility of the surrounding areas which contain the large and historic cities of Lucknow, Calcutta, Patna, Benares, Agra, Delhi and Allahabad. These are the home of much of the ancient civilization of the country and before the construction of the railways the stream of the Ganges formed the sole important channel of traffic between the interior of India and the sea-board: it is still one of the great waterways of the world.

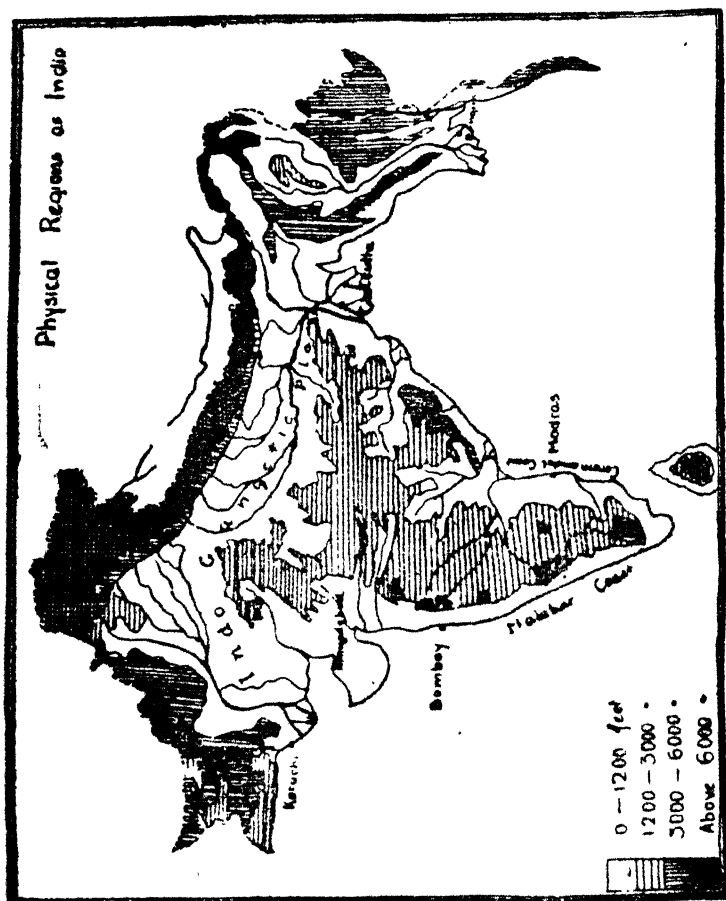
The Brahmaputra has a considerable part of its course in Tibet and enters India through the mountains in north-east Assam. It flows very slowly and is much used for traffic between Assam and Bengal.

The Indus flows in a north-westerly direction through Tibet and Kashmir and then passes southward through the western Punjab, where, below Dera Ghazi Khan, it unites with the accumulated water of the five rivers of that province. It enters the Arabian Sea near Karachi and the delta at its mouth covers an area of 3,000 square miles. The agricultural development of Sind could not be carried

out without this river and the largest system of irrigation canals in the world is only made possible by the slow and steady flow of these rivers of the Indus basin.

III. The Deccan Plateau.

South of the region of the Plain is the old region of table-lands known as the Deccan Plateau. This occupies



the whole peninsular part of India, except the narrow coastal strips, and forms a triangle with the Vindhyan range for its base, the Eastern and the Western Ghats as

the two sides and Cape Comorin as its apex. The region is quite different from the low lying Indo-Gangetic plain as, instead of being smooth and flat, it is a tableland with an elevation varying from 1,000 to 3,000 feet above sea-level and broken up by many deep and narrow river valleys, *i. e.*, the Nerbada and the Tapti flowing into the Arabian Sea, and the Mahanadi, Godavari, Kistna and Jauvery flowing into the Bay of Bengal. These are not slow-fed like the rivers of Northern India, nor are they slow and navigable; they have many waterfalls and rapids.

The soil of the Deccan is not alluvial but thin; it has been built up by the disintegration of hard rocks and is therefore not very fertile, except in the north-west of the Plateau, where black cotton soil is found. On the whole, although the region is larger in area than the Gangetic Plain, it is not so fertile and hence not so well-populated. The chief products are millets, oilseeds, tobacco, sugar-cane, pulses, rice, cotton, tea, coffee, and spices, and trees such as teak, ebony, and sandal-wood.

IV. Coastal Areas.

The coastal areas of India are the narrow strips of territory formed on the east and the west sides of the triangle of the tableland into alluvial coastal plains. The western coast strip extends from the mouth of the Tapti to Cape Comorin, and in some places is forty miles in width, with the Konkan and Malabar as its two most important districts. The eastern strip is wider than the western and is known as the Coromandal coast area, the richest part of which is in the Carnatic. These strips are well watered, have a tropical climate, and include some of the most fertile and densely populated districts in India.

Burma is geographically and ethnically well marked from the rest of India. From 1876 to 1937 it was politically a part of India, but as a result of the

recommendations of the Joint Parliamentary Committee in Government of India Act, 1935, Burma was separated from India and is now a foreign country to all intents and purposes. It is a mountainous country with abundance of rainfall and a somewhat unhealthy climate. The region is only sparsely populated ; timber from the forests, petroleum and rice are the more important products.

Soils of India.

The Royal Commission on Agriculture in India (1928) recognized four main types of soils in the country, the characteristic qualities of which depend on the chemical composition and the quantity of rain they get each year.

I. The most important are the alluvial or deltaic soils which extend over the greater part of Sind, Rajputana, Punjab, United Provinces, Bengal, certain districts of Madras, extensive areas of Assam and the Eastern and Western coast strips of the Peninsula. These soils are extremely fertile ; though deficient in nitrates they are chemically very rich, and contain an abundance of phosphoric acid, potash, lime and magnesia. With a well-distributed rainfall the alluvial soils are capable of growing a great variety of *Rabi* and *Kharif* crops.

II. Next in importance is the famous *black cotton soil* of the Deccan, found chiefly in Gujrat and Kathiawar plains of Bombay, in the valleys of the Central Provinces, in the ceded districts of Berar, and in the Coimbatore and Tinnevely districts of Madras. It is dark in colour, and particularly suited to the growth of the long-rooted, indigenous cotton plant, but not for the shallow-rooted American cotton. In dry weather the soil cracks and allows the monsoon rain to sink right in ; thus the moisture is retained for months and the soil has been said to

plough and irrigate itself ; very little attention is necessary in order to grow long-rooted Indian cotton.

III. Then there are the red soils of the crystalline tracts—Madras, Mysore, South-East Bombay, Hyderabad, Central Provinces, Orissa, Chota Nagpur and South Bengal. They are moderate in fertility and rice grows abundantly when these soils are irrigated by canals ; under well-irrigation also a great variety of crops can be grown.

IV. The laterite soils which form a belt around the Peninsula and extend through Eastern Bengal into Assam are formed by the decomposition caused by excessive tropical rainfall ; these soils vary considerably in fertility,
Climate and rainfall.

India has a great variety of climate and rainfall ; in the northern parts there are extremes of heat and cold even in the same season. There may be intense cold on the Himalayas with a pleasant climate in Kashmir : the plains of the Punjab are hot in summer but cold on winter nights, while Sind is almost a rainless desert. In the Punjab, the *daily* range of temperature is one of the highest in the world, averaging about 30°F. The Peninsula area, lying as it does in the tropics, has a uniformly hot climate throughout the year ; Malabar is a perpetual hot-house.

The variations in rainfall are no less striking. While the average in India is about 45", places like Chirapunji get 460" in the year, while 6" is the average in Sind. The remarkable feature of Indian rainfall is its periodicity. In Europe rain may be expected at any time of the year, but in India it is almost entirely confined to certain definite seasons, because the rainfall is controlled by the Monsoons.
Monsoons.

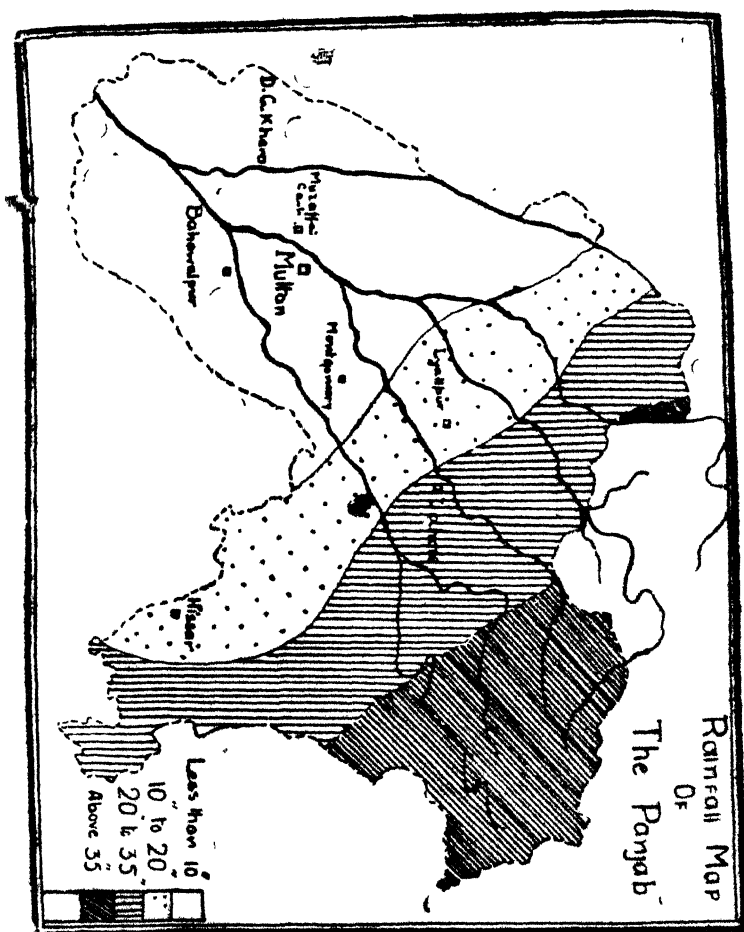
In Northern India during March, April and May the heat is very intense on the plains. The land becomes warmer than the Indian Ocean which lies to the south ; the

air over the land becomes hotter than that over the sea and thus it flows from across the South Indian Ocean towards India. As this wind blows over hundreds of miles of seawater it becomes laden with moisture and this rain-bearing wind is called the South-West, or Summer Monsoon. This current of air enters the Indian seas in early June and in the succeeding two or three weeks it spreads over the Arabian Sea and Bay of Bengal up to their extreme northern limits, and advances over India from those two water areas. The current from the Arabian Sea blows on to the west coast, and, sweeping over the Western Ghats, blows more or less strongly over the Peninsular area, Central India, Rajputana and the northern part of the Bombay Presidency. The current from the Bay of Bengal blows northwards and one portion is deflected towards Burma, Eastern Bengal and Assam, while the other curves to the north at the head of the Bay, blows over Bengal and then, meeting with the barrier of the Himalayas, turns towards the west right up the Ganges Valley, as a south-easterly or easterly wind.

The South West Monsoon continues for three or four months from June to September. During its prevalence more or less general (though far from continuous) rain falls throughout India. The principal features of this rainfall distribution are as follow :—

The greater portion of the Arabian Sea area current (the total volume of which is probably three times as large as that of Bengal), blows directly on to the west coast districts. Here it meets an almost continuous hill range, is forced to ascend, becomes cooler, and gives heavy rain alike to the coast districts and the hilly ranges, the total averaging about 100 inches, most of which falls in four months. This wind, after parting with most of its moisture, advances across the Peninsula, giving occasional, uncertain

rain to the Deccan ; passing on, it coalesces with the Bengal Bay current. The northern portion of the current blows across the Gujrat, Kathiawar and Sind coast, gives a certain amount of rain to the coastal districts and also frequent showers to the Aravalli Range, then, passing northward,



Kangra receives over 100 inches annually. On the other end is Multan which in some years gets less than 2 inches and the average is about 5 inches.

gives moderately heavy rains in the eastern Punjab, Rajputana and the north-western Himalayas. It is in this region that it meets and mixes with the wind from the east. The monsoon current over the southern half of the Bay of Bengal blows from the south-west and is thus directed towards the Tennasserim hills and up the valley of the Irrawady, to which area it gives very heavy rain. That portion of this current which advances sufficiently far northward to blow over Bengal and Assam also gives very heavy rain to the low-lying districts of Eastern Bengal and then, coming immediately under the influence of the Assam hills, it is forced upwards and gives excessive rain (perhaps the heaviest in the world) to the southern face of these hills. The remaining portion of the Bay Current advances from the south, over Bengal and is deflected westward by the barrier of the Himalayas. It gives general rain over the Gangetic Plain and almost daily rain over the lower ranges of the Himalayas from Sikkim to Kashmir.

To the south of this easterly wind from the Bay of Bengal and to the north of the westerly winds from the Arabian Sea, there exists a region (running roughly from Hissar in the Punjab through Agra, Allahabad, and part of Chota Nagpur to Orissa) where neither current of the Monsoon blows. In this area the rain-fall is uncertain and would probably be light, were it not the fact that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and give occasional heavy falls of rain.

The total rainfall of this monsoon period is 100" over part of the west coast, but the amount diminishes eastwards; it is below 20" over a large part of the central and eastern part of the Peninsula, and is only 5 inches in South Madras. It is over 100" on the Tennasserim and South Burma coasts and decreases to 2" in Upper Burma. It is

also over 100" in north Assam and diminishes steadily westward until it is only 5" in the lower Indus Valley.

About 90 per cent. of the rainfall of India falls in the Summer Monsoon and upon the appropriate quantity of this rainfall depends the prosperity of at least five-sixths of the people of India. A very small deviation in the direction of the west winds may cause a usually well watered district to become a desert. Generally it is not the average rainfall of any district, but the deviation from that average, together with its time distribution, that causes disorder. A deficiency in the expected rainfall causes famine, and too much rain may rot the crops, while the unduly early, or late, arrival of the monsoon may entirely spoil the harvest. It is the extreme uncertainty of rainfall and its contraction into a few months of the year that has necessitated the practice of irrigation on a large scale in India; more, in fact, than in any other country.

North-East or Winter Monsoon. By the end of September the pressure of the air in northern India and *Burma* increases; the moisture-bearing current of air still blowing into the Bay of Bengal cannot penetrate into the higher pressure regions; it turns along the area of low pressure (now lying over that Bay instead of in Northern India), and strikes the southern end of the peninsula. This North-East Monsoon, which is really the South-West Monsoon in retreat, gives to the south-east of the Peninsula some rain between October and December; actually about one-tenth of the total rainfall of the year. It also gives rain to Hyderabad State, Berar, some parts of the Central Provinces and Bombay as well as Madras and the Punjab.

Indian Harvests.

Corresponding to the monsoons, there are two general sowing and harvesting seasons in India. The *Kharif*, or *Sawani* crops are sown at the beginning of the south-west

monsoon and harvested in autumn ; these are mostly millets, pulses, rice and some types of cotton and hemp. The *Rabi* or *Hari* crops, principally wheat, barley, pulses, opium, tobacco, oil seeds and some varieties of castor, are sown at the end of the Monsoon and harvested in spring. During the hottest months of the year (May and June) the land is rested. Most areas grow two crops each year, others give three crops in two years and there are some, where only a *Kharif* or a *Rabi* crop may be obtained in alternate years. On very poor land a *Rabi* crop may never be obtained, but a *Kharif* crop may be taken for two or three successive years and then for one year the ground left fallow.

Rainfall and Area Sown.

In the Punjab out of 28,845,320 acres sown in 1938-39, 16,835,065 acres (or 59 per cent.) were irrigated, 28·7 per cent. by wells, 70·2 per cent. by canals and 1·1 per cent. by other means ; the remaining 41 per cent. of the sown area depended on rainfall. The figures of British India for the same year show that 68 per cent. of the net area cultivated is unirrigated. The following table shows the acreage sown in the Punjab, the area matured and also the rainfall.

**Sown and Matured Acreage, Rainfall
and Maturity percentage in the Punjab.**

Year	Sown area	Matured area	Percentage maturity	Average annual rainfall (inches)
1929-30	30,954,237	34,551,255	79	27
1930-31	30,265,208	25,122,601	83	25
1931-32	32,006,677	26,738,844	84	25
1932-33	30,057,262	23,443,042	78	24
1933-34	34,494,005	28,569,714	83	32
1934-35	29,833,330	25,200,000	85	27
1935-36	31,900,000	26,700,000	84	23
1936-37	32,660,968	28,021,117	86	30
1937-38	31,572,607	26,119,720	83	32
1938-39	28,845,320	22,569,708	78	23

The sown area fluctuates considerably from year to year and mainly with the character of the rainfall. It is low in a dry year and high in a year of a good Monsoon. The percentage of matured area is adversely affected both by the failure of a Monsoon and excess of rainfall. According to Punjab peasants 'ideal monsoon conditions are represented by *Sawan nit* (a daily shower during the month of *Sawan i.e.*, middle of July to middle of August), *Bhadon char* (a good shower every week during *Bhadon, i.e.*, mid August to mid September) and *Assu ik* (one good shower in *Asoj i.e.*, mid September to mid October).

Principal Crops of India.

India's premier industry is agriculture, and the annual value of the agricultural produce has been estimated at a little over 1,500 crores of rupees. The chief crops may be classified as foodstuffs, oilseeds, fibres and other non-food crops such as drugs and beverages.

The total net area of British India in 1936-37 is 67,91,42 thousand acres. Out of this 23,19,28 thousand acres are sown with crops, 4,86,38 thousand acres are fallow land, 15,42,58 thousand acres are cultivable waste, 8,91,73 thousand acres are under forest and 15,50,04 thousand acres are not available for cultivation.

The table below gives the area under each crop in 1935-36 and 1936-37 in the British India and in the Punjab. Food-crops occupy 81.5 per cent. of the total sown area but the non-food (or commercial) crops such as cotton, jute and oil-seeds show a tendency to increase. We may now consider the important facts about each crop.

Area Under Crops in Thousand Acres

Crops	British India		Punjab		Punjab Percentage	
	1935-6	1936-7	1935-6	1936-7	1935-6	1936-7
<i>I. Food Crops :—</i>						
Rice ...	8,05.83	8,16.78	9.72	10.39	1.2	1.2
Wheat ...	2,51.50	2,52.50	93.00	93.99	36.9	37.2
Barley ...	61.78	65.31	6.66	7.40	10.7	11.3
Jowar ...	2,15.50	2,40.13	8.21	9.28	3.8	3.8
Bajra ...	1,30.74	1,14.51	30.18	28.51	23.0	24.8
Ragi ...	35.98	35.85	18	19	0.5	0.5
Maize ...	62.17	59.54	10.91	10.78	17.5	18.1
Gram ...	1,50.28	1,57.95	47.08	49.09	31.3	31.0
Other grains ...	2,97.64	2,97.78	15.50	14.21	4.5	4.7
Fruit and Vegetables ...	47.49	48.35	2.48	2.54	5.2	5.2
Other food crops ...	19.29	19.32	2.35	2.35	12.1	12.1
Sugarcane ...	38.75	42.85	4.74	5.54	12.2	12.9
Total food crops ...	21,16.95	21,50.87	2,29.01	2,34.27	10.8	10.9
<i>II. Oilseeds :—</i>						
Linseed ...	21.22	23.42	28	31	1.3	1.3
Sesamum ...	36.96	37.29	85	100	2.2	2.6
Rape and mustard ...	29.30	33.18	7.05	9.82	24.0	29.5
Others ...	15.82	18.06	15	25	.9	1.3
Total ...	1,03.30	1,11.95	833	11.38	8.1	9.9
<i>III. Fibres :—</i>						
Cotton ...	1,57.61	1,53.57	28.03	29.09	17.7	18.9
Others ...	7.69	7.60	49	51	6.3	6.7
Total ...	1,65.30	1,61.17	28.52	29.60	17.3	18.4
<i>IV. Dyes :—</i>						
Indigo ...	40	43	10	9	25.0	20.9
Others ...	16	16	12	12	75.0	75.0
Total ...	56	59	22	21	39.3	35.6
<i>V. Drugs and Narcotics :—</i>						
Opium ...	10	10	2	2	20.0	20.0
Tea ...	7.87	7.94	10	10	1.2	1.2
Tobacco ...	12.31	11.51	78	62	6.3	5.3
Others ...	2.62	2.59	1	1	0.3	0.3
Total ...	22.90	22.14	91	75	4.0	3.4
<i>VI. Miscellaneous :—</i>						
Condiments and spices ...	16.46	14.14	70	35	4.2	2.4
Fodder crops ...	1,07.90	1,07.92	50.69	49.89	46.9	46.2
Other non-food crops ...	11.87	12.31	13	15	1.0	1.2
Total ...	1,36.23	1,34.37	51.52	50.39	37.8	37.4
Total Sown area ...	26,21.00	26,75.79	3,18.51	3,26.61	12.1	12.2
Deduct area sown more than once ...	3,33.86	3,56.51	43.89	47.55	13.1	13.3
Net area sown ...	22,87.13	23,29.28	2,74.62	2,79.06	12.0	12.0

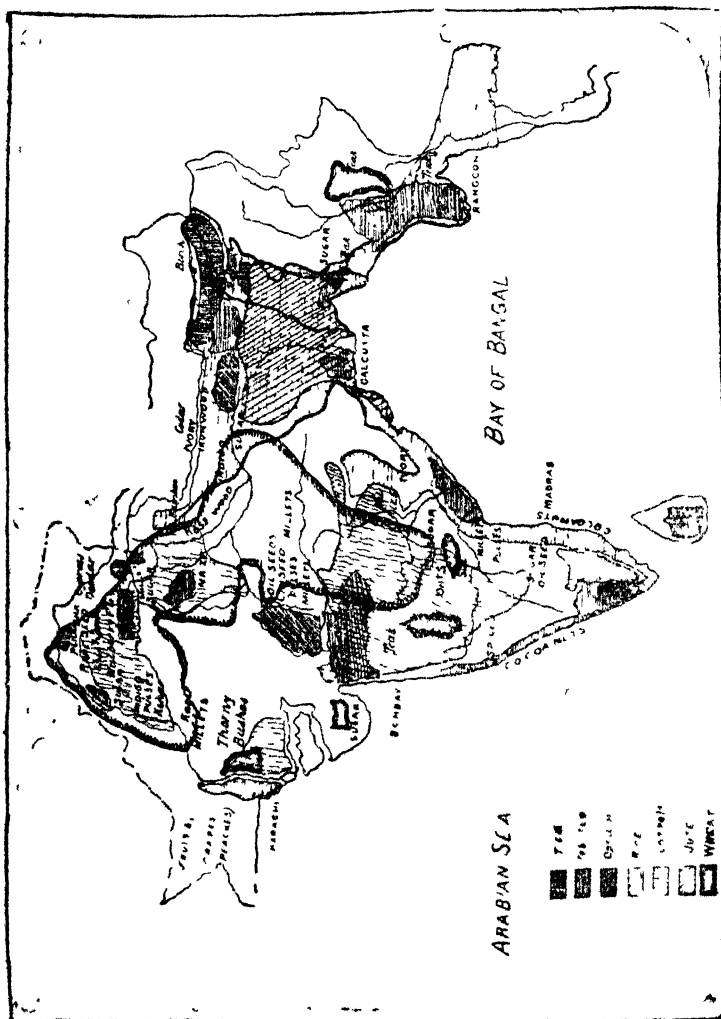
1. Foods Crops.

(i) Rice is the largest and most popular staple food crop of India ; occupying more than 32 per cent. of the total cultivated area, it is grown extensively throughout the country. In 1938-39, the total production of rice in India was about 23'6 million tons. Since the separation of Burma, India is a rice importing country. In 1938-39, 1'281 million tons of rice at Rs. 11,36 lakhs was imported from Burma. It requires plenty of water and heat for its growth ('its feet in the water and its head in the sun'), and is therefore cultivated chiefly in Bengal, Behar, Orissa, Assam, the West Coast strips and in those districts of the United Provinces and the Punjab where there is an assured supply of water. Burma which before 1937 was a part of India has almost a monopoly of the export of rice ; the population there is not so heavy compared with the area under rice cultivation, as in the rice growing areas of India and there is a large surplus for export. Rice is a winter crop in Burma and the area under the improved varieties distributed by the Agricultural Department now exceeds one million acres. During the last few years the Indian crop has been below the average and there have been very considerable imports of Burma rice into India.

(ii) *Wheat* is the next most important crop in India and it covers more than 13 per cent. of the total sown area. It is the staple food of the people of the Punjab, U. P., and North-West Frontier Province ; elsewhere it is grown mainly for export.* It is a *rabi* (spring) crop sown from October to December, and harvested from March to May. It requires alluvial clay soils, cold in its early growth and dry weather at the time of ripening. As a result of many and varied plant-breeding researches carried out at Pusa

* Among the Indian provinces, the Punjab has the largest area under wheat—more than 37 per cent. of the total wheat area of India—followed by the United Provinces, 30 per cent.

and Lyallpur, it has been possible to arrive at a number of improved varieties, definitely superior in yield and quality, which have received general acceptance by the cultivator in India. Though the area under improved wheat is extensive, it is but a small proportion of the total area under wheat, and is far short of complete replacement.



It is interesting to note that not a single day passes when there is not on the surface of the earth one country or the other harvesting wheat. The chief importing countries are United Kingdom, Italy, Germany, France and Belgium ; all are in Western Europe, and all crowded together in a very small portion of the earth's surface. The chief wheat exporting countries of the world in the order of their importance are Canada, U. S. A., Russia, Australia, Argentine Republic and India. India holds a distinctive position among the great wheat-growing lands of the world as a country of large production and consumption. Other countries (particularly Russia) have recently adopted such improved methods of cultivation that India's export of wheat has greatly declined relatively to other countries since the Great War. In recent years large quantities have been imported from Australia. India's importance as a wheat exporter was greatest in the periods 1881 to 1894 and from 1903 to 1914 ; and this decline in exports is not due to any fall in wheat production, but to its increased consumption at home and the relative fall in prices. The total production in the country has increased and improved qualities of wheat have been introduced by the provincial agricultural departments. Karachi is the greatest wheat exporting port in India and the improved facilities there, such as the creation of grain elevators, have helped materially in encouraging the export of grain. The area under improved qualities exceeds four million acres. With the development of irrigation from the Lloyd Barrage canal in Sind, and in the newer Punjab canal colonies a further increase in wheat production is practically certain. The prospect is that consumption will keep pace with the increase in production and that India will remain a minor and erratic contributor to the world's wheat trade. In 1928-39, the total production of wheat in India was 99 million

tons but owing to a record production of wheat (4,490 million bushels) in other countries in that year the demand for Indian wheat declined and only 279,000 tons of wheat and 61,000 tons of wheat flour was exported, the former to the United Kingdom and Germany and the latter to Burma, Arabia and Aden. Large imports of wheat were threatened and consequently in order to meet foreign competition the duty at Rs. 1-8-0 per cwt. was imposed from December, 1938 to March, 1940; the imports amounted to 159,000 tons in 1938-39. The Imperial Council of Agricultural Research has recently appointed two Standing Committees to advise on problems connected with rice and wheat. At present little Indian wheat finds an outlet in foreign markets on account of serious competition in prices, and it cannot compete with imported wheat at the principal ports and adjacent areas. The annual demand at these places is estimated to be about 500000 tons.

(iii) *Barley*. This crop generally requires conditions of cultivation similar to those for wheat but it can be grown over a wider area. It is used as food both for man and cattle and in India it is grown chiefly in the United Provinces and Behar. It is mainly a food, and not a commercial, crop in India and there is little export.

(iv) *Millets*. The two Indian varieties of millets (*jowar* and *bajra*) are grown extensively all over the country, especially in Bombay, Madras, Punjab, Central Provinces, United Provinces, and Hyderabad (Deccan). They are important food crops for the poorer classes and are also used as cattle fodder. There is not much export and they do not require as thorough a method of cultivation as wheat; *bajra* is a *kharif* crop, while *jowar* is cultivated both in the *kharif* and *rabi* harvests.

(v) *Pulses.* These, and especially gram, form an important part of the diet of the people all over the country. They are chiefly grown in the United Provinces, Punjab, Bombay, Central Provinces and Bengal, and of these the United Provinces produce half the total supply. As the home demand for pulses is large, the export trade is not very important.

(vi) *Sugar.* India is the original home of the sugarcane, a tropical plant which requires a great deal of water and a well-drained soil. It takes a longer time to grow than most other crops; it is usually planted from February to May and is harvested from November to January. The chief sugar-cane districts are in the United Provinces, Behar, Madras and the Punjab. The area under cultivation is larger in India than in any other country, but the yield per acre is less than one-third that of Cuba and one-sixth that of Java or Hawaii; now indigenous canes of low-sucrose have largely been replaced by the Coimbatore variety which gives a better yield.

The consumption of sugar in the country is very great. In 1938-39 the quantity available for consumption was about 1,159,000 tons. Formerly large quantities were imported from Java to meet the increasing demand, but since the passing of Sugar Industry Protection Act, 1932 by which a protective duty of Rs. 7/4/- per cwt. was levied on all imported sugar up to 31st March 1938, (extended by the Sugar Industry Protection Temporary Extension Act to 31st March, 1942) a great stimulus has been given to the production of sugar in India by modern methods.*

* The duty was enhanced in 1934-35 to Rs. 9-1 per cwt. and an excise duty of Rs. 1-5 per cwt. was levied on Indian made sugar. In 1938 the protective duty was reduced to 7/4/- plus excise duty on factory sugar.

On the recommendation of the Tariff Board it is proposed to extend the protective Duty upto 31st March, 1940 and to retain the excise duty at Re. 1 per cent. on factory sugar and at -/8/- per cent. on *Khandasari* sugar.

From April, 1939 the duty was reduced to Rs. 6/12/- per cwt. Imports of sugar have now greatly decreased and signs are visible that India will become self-sufficient very shortly in respect of sugar. The area under sugarcane in 1929-30 was 2,677,000 acres, and it increased to 3,108,000 acres in 1938-39. Production of sugar in India may be classified under three main heads: (a) by modern factories working with cane, (b) modern refineries working with raw sugar (Gur) and (c) indigenous open pan concerns. The output of sugar in 1938-39 fell 1,075,000 tons from 1,248,000 tons in the preceding season. The area under sugarcane declined and the crop was damaged by floods and pests, consequently prices soared rapidly. The production of gur for direct consumption which had been increasing from 1931-32, registered a decline in 1938-39.

<i>Years</i>		<i>Tons.</i>
1931-32	...	27,72,000
1932-33	...	32,45,000
1933-34	...	34,77,000
1934-35	...	39,92,000
1935-36	...	41,05,000
1936-37	...	44,54,000
1937-38	...	54,00,000
1938-39	...	40,90,000

The total number of modern sugar factories in 1938-39 was 136 and the output in Indian factories during the last ten years as published by the Director, Imperial Institute of Sugar Technology is as under :—

<i>Year</i>		<i>Direct from Cane (Nov.-Oct.) Tons</i>	<i>Refined from Sugar (Jan.-Dec.) Tons</i>
1929-30	...	89,800	21,200
1930-31	...	119,900	31,800
1931-32	...	158,600	69,500

Year		Direct from Cane (Nov. Oct.) Tons.	Refined from Sugar (Jan.-Dec.) Tons
1932-33	...	290,200	10,800
1933-34	...	454,000	61,100
1934-35	...	578,100	39,100
1935-36	...	932,100	50,100
1936-37	...	1,111,400	19,500
1937-38	...	930,700	16,600
1938-39	...	65,800	15,600

There has been a world wide fall in the price of sugar due to excessive production. In November, 1937, the Government of India decided to ratify the International Sugar Agreement by which India was committed not to export sugar to foreign countries (except) Burma for a period of five years. This agreement raised some adverse criticism from the Indian press and public men.

(vii) *Other Food Crops.* India grows a variety of fruits and vegetables and their cultivation is increasing in the neighbourhood of towns, but sufficient attention has not yet been paid to the growing of these; the mass of the people are poor and not accustomed to their consumption. Their cultivation can be made more profitable with development of transport, careful packing and the provision of cold-storage facilities.

Condiments and spices (pepper, chillies, ginger, cardamum, betelnut, cinnamon and cloves) are chiefly grown in the extreme south of India, although certain varieties are cultivated everywhere. The export trade in 1934-35 amounted to over 286,000 cwts.

II. Oilseeds.

India grows a variety of oilseeds, e.g., linseed, sesamum, rape, mustard, groundnut, castor, cocoanut, cotton seed, mowra, niger, corianda, cummin, ajwan and kardi. More than six per cent. of the total sown area of the country is under oilseeds and most of the product is exported. In Western countries vegetable oils are put to

many uses ; refining processes have been developed and many varieties of oils are used for eating. In America cotton seed is crushed, and the oil used as manure or cattle-food. In India a large proportion of the cotton seed is exported and there would seem to be considerable scope for the development of these crops and their allied industries. "The distribution of the different oil-seeds varies greatly in the different provinces. Groundnuts are grown chiefly in Madras, Bombay, and the Central Provinces. Sesamum is also widely distributed in these provinces, and over extensive areas in the United Provinces, Behar and Orissa, Bengal and the Punjab. Rape and mustard are typical cold-weather crops of the northern provinces and occur mostly in the Punjab, Bihar and Orissa, Bengal and the United Provinces. Linseed is widely distributed in Behar and Orissa, the United Provinces, and also in the Central Provinces. Castor and coconut are important oil-seeds in Madras, and the former is also cultivated to a fair extent in Bombay and Behar and Orissa."* "As a result of the Ottawa Trade Agreement, Indian vegetable oils and seeds enjoy important tariff preference in the United Kingdom, and by the same agreement certain tariff preferences on Indian vegetable oils were secured in other parts of the British Commonwealth. The consequence of this preferential treatment of Indian oil-seeds is clearly brought out by a comparison of the export figures of 1933-34 with those of former years. The total exports of Indian oil-seeds of all kinds improved in quantity from 733,000 tons in 1932-33 to 1,124,000 tons in 1933-34, and from Rs. 1,131 lakhs to Rs. 1,366 lakhs in value. Relatively to 1932-33, therefore, there was an improvement of 53 per cent. in quantity and 21 per cent. in value "† The exports,

* Paper read before the Indian Section of the Royal Society of Arts by Dr. F. Shaw, Director, Imperial Institute of Agricultural Research.

† Ibid.

increased to 1,199,000 tons valued at Rs. 15.06 lakhs in 1938-39 ; groundnuts and linseed formed the bulk of these exports.

III. Fibres.

Cotton is one of the most important commercial and export crops of India. It is grown in all the provinces, and there are two crops, (the early and late) grown in this country. Early cotton grows mainly in Central and Northern India, and late cotton in Southern and Western India. Taking both the crops together, the cotton sowing season extends from March to August and the harvesting season from October to April. It covers about 25 million acres, and about twelve varieties are grown, with an annual production of about 5,807,000 bales of 400 lbs. each (1938-9). About 54 per cent. of this is consumed by the Indian mills and the rest about 46 per cent. is exported to Japan, China and the continent of Europe. Japan is the most important purchaser ; it bought 1,211,000 bales out of 2,703,000 bales exported in 1938-9. By virtue of an agreement between the Government of India and Japan which will have effect up to the 31st of March 1944, India will import 288 million yards of Japanese piece goods for one million bales of raw cotton taken by Japan.

The chief producing centres are Punjab, Bombay, the Central Provinces, Hyderabad, and Madras. Punjab occupies the pride of place amongst all so far as quantity produced is concerned. The estimated production in the Punjab in the year 1935-36 was 1,596,000 bales of cotton of 400 lbs. each as against 1,122,000 bales in Bombay Presidency. The latter is however an important cotton growing province as the black cotton soil of the Deccan is very suitable for its growth. Punjab and Bombay provinces produce about half the cotton grown in India.

The best quality cotton is grown in the provinces of Sind and Bombay.

The area under cotton has increased at the expense of food crops. The yield per acre is, however, very low, being only 85 lbs. per acre compared with 200 lbs in U. S. A. and 450 lbs. in Egypt. Further, Indian cotton is short in staple and generally inferior to American or Egyptian cotton. The Agricultural Department has directed its efforts to the improvement of the quality and yield ; the attempts to cultivate Egyptian cotton in Sind were not fruitful, but the American variety has been grown very successfully in the Punjab Canal Colonies, while the Cambodia, or Tinnevely, variety has been introduced in the red soil of Madras.

As a result of the effort to make the British Empire self-supporting in respect of its cotton supply, the Indian Cotton Committee was appointed in April, 1921, in order to examine the possibilities of increasing the supply of cotton in India, to suggest improvements in the existing methods of ginning and marketing, and to make recommendations in regard to the prevention of adulteration, dumping and mixing. The Committee recommended the introduction of long staple varieties, the encouragement of open marketing, the extension of co-operative sale societies, licensing of cotton-ginning and pressing factories, and restrictions on the transport of cotton to prevent adulteration. In pursuance of the recommendations, the East India Cotton Trade Association was formed for the improvement of the trade and the Central Cotton Committee was appointed to keep closer touch between the Agricultural Department and the cotton trade people. The Cotton Transport Act, the Cotton Ginning and Pressing Factories Act, the Bombay Cotton Markets Acts, the C. P. Cotton Markets Act and Madras (Commercial Crops) Market Act have been passed at the instance of the Committee ; these are doing

much to check the adulteration of cotton and to promote better marketing. Exports from Bombay amounted to 50 per cent. of the total quantity of raw cotton exported from India in 1935-36 and those from Karachi to 42 per cent.

Jute. In recent years Jute has been the best paying crop of India. This is an autumn crop, being sown from March to May and harvested in August and September. It requires low lands which become submerged in water after the plants have made some progress, and thus its cultivation is confined almost solely to the Ganges Valley, Delhi, Bengal, Assam, Behar and Orissa. Its cultivation in the Ganges tract of the United Provinces has also been successful. The production of Jute in 1938-39 was 67 lakhs bales as against 87 lakhs bales in 1937-38, and 96 lakhs bales in 1936-37. India enjoys almost a monopoly in the world's production of jute and it forms about a quarter of the total export trade of the country; mills in India consumed 62 lakhs of bales out of 67 lakhs produced in 1938-39. The world depression in trade has recently led to a fall in demand, a slump in prices and a decrease in production but formerly it was one of the best paying crops in India. Germany and the United Kingdom are the principal customers for India's raw jute. Other importing countries are Spain, France, Japan, China, United States, Italy and Belgium.

IV. Other Non-Food Crops.

Indigo. The Indigo industry which is very old in India, was originally in the hands of the Dutch and the Portuguese, but the East India Company revived and encouraged the industry with the help of American planters in Bengal. Soon the production became so important that it represented more than half the value of the total dyeing and tanning materials exported from India. The industry has had

several set-backs owing to foreign competition, especially from the production of cheaper German dyes which have again come into the market since the close of the Great War. The future of the industry does not seem to be very bright unless very cheap production can be secured.

Coffee. The cultivation of coffee in India is almost entirely confined to Mysore, Coorg and Madras. It is sown and transplanted in the rainy season and the harvesting period is from October to January. It is now a declining industry as cheaper brands are superseding Indian coffee in European markets and its cultivation is being replaced by tea.

Tea. Next to China, India is the largest producer of tea in the world. It is grown chiefly in Assam, but also in Bengal, Nilgiri Hills, Kangra Valley and Dehra Dun. Its production, consumption and export have grown considerably and the industry, which has been fairly prosperous, is mainly in the hands of European planters; it is controlled and encouraged by the Indian Tea Association of Bengal and Assam and the United Planters' Association of Southern India.

Opium. The production of opium is a monopoly of the Indian Government, and the output has been progressively reduced as a result of the decision to stop all exports to China and to control and discourage internal consumption.

Tobacco. The principal centres of the tobacco industry are Eastern and Northern Bengal, Southern India and Lower Burma. Much of the production is consumed in India, but there is a good export trade, especially from Madras and Rangoon. In spite of a large crop, there is a considerable import of manufactured tobacco and cigarettes into the country. The number of cigarette factories is growing in India and the quality of the tobacco used in their manufacture is being improved. Good cigars

are being manufactured at Trichinopoly, and Dindigal in Madras,

Yield Per Acre of Principal Crops.

The yield per acre of crops in this country is very low as compared with that in other countries, owing to the primitive methods employed in agriculture.

The Indian cultivator is illiterate and he does not use improved seeds and up-to-date machinery nor does he try to destroy the pests which are very harmful to the crops. In the recent world depression he was very hard hit. The prices of agricultural commodities fell very materially after 1929* as may be seen from the following table of the total value of the principal crops in the Punjab.

Crops	Value in Lakhs of Rupees		Percentage decrease from
	1928-29	1933-34	1928-29
Wheat ...	35.52	16.16	54.5
Cotton ...	8.47	6.38	24.4
Sugar (raw) ...	4.72	3.22	31.8
Rapeseed ...	3.03	1.18	61.1
Barley ...	2.41	58	75.9
Jowar ...	1.06 *	37	65.1
Bajra ...	3.40	1.80	47.1
Maize ...	4.31	1.32	69.4
Gram ..	9.26	6.72	27.4
Rice unhusked ...	4.60	2.38	48.3
Total ...	76.78	40.11	47.8

*The figures for eight provinces show that the value of the main crops fell from 10,21.20 lakhs of rupees in 1928-29 to 4,73.94 in 1933-34, or a fall of 53.6 per cent.

Crop Yield Per Acre (in lbs.) in India, Punjab and some other Countries

Product	India		Punjab				
	1935-36	1936-37	Average 1927-28 to 1936-37	1935-36	1936-37	Average 1927-28 to 1936-37	
Wheat	628	662	628	735	810	723	Denmark 2,316, Sweden 1,853, Austria 1,290.
Raw sugar	3,302	3,397	2,931	1,701	1,764	1,671	Formosa, U. S. A. 35,219.
Tea	474	474	500	238	249	211	Ceylon 394, Japan 1,099.
Cotton, ginned	91	100	86	176	200	135	Egypt 524.
Linseed	251	261	266	198	190	214	Spain, Egypt 896.
Rapeseed	402	376	362	359	363	321	Bulgaria 640, Czechoslovakia 1,307.
Sesamum	183	195	195	184	183	182	France, Netherland.
Rice	757	881	841	.....	.....	.....	Italy 425, Spain, Japan 3,492.
Jute	1,332	1,204	1,266	.....	.....	.....

FOREST WEALTH OF INDIA

The forests of India are a great national asset, and their value is now slowly being recognized ; they not only supply timber, fuel, oil, fodder, edible roots and fruits in time of famine, and give employment to a large number of people, but they have a great effect on the water supply and climate of the country. Forests tend to reduce floods, check avalanches, and add to the beauty of a country ; the streams and springs, having their sources in forest areas, give a constant supply of water ; their volume is neither much decreased in the dry season, nor much increased in the rainy season. The careless destruction of forests on the mountain slopes has increased the damage from erosion and denudation, landslips, tremendous floods, silting and destruction of fertile valley lands. In the Punjab, there are pathetic instances of the cutting down of trees and forests.* Taxila was one of the most flourishing towns of ancient India, but now it is buried under several feet of earth owing to floods, caused by the reckless destruction of forests. In the Hoshiarpur district, the *chos* have rendered thousands of acres of culturable land barren, by bringing down tons of sand, boulders and pebbles. The prosperity of the Punjab depends largely on its canals, but rivers when in flood, may destroy canal-head works as well as roads, railways, bridges, crops and homesteads. The importance of forests in the development of the industries of a country can be hardly exaggerated ; saw mills, furniture, match and resin factories, paper mills, railway workshops, ships and dock-yards are all, to a large extent, dependent on the existence of forests. Among the minor forest products of India

* In 1901-02, the area under forests in the Punjab was 3,522,199 or 6·2 per cent of the total area of the Province ; in 1933-39 area had decreased to 1,974,750 acres or 3·3 per cent of the total area.

shellac, soap-nuts, honey, *mahwa* flower, rosha grass, oil and tanning materials are important.

As a consequence of the great varieties of climate, rainfall and temperature, most types of forests are represented in India. Burma with its great forests has now been separated from India, but even so there remains in India a total area of 99,746 square miles of forests. Much of this forest is at present inaccessible or unprofitable, or waste, and of use only to the local population, but 82,000 square miles are managed in accordance with working plans which provide for a sustained yield of timber or other produce. In addition to the government forests there are large areas of forest in some of the States and considerable areas privately owned; more than half of Burma (now a foreign country) is forest, while in India proper the largest areas are in the Central Provinces, Assam and Madras. The total number of animals grazed is over 11½ millions. The value of wood and timber exports exceeds 20 lakhs of rupees and the gross forest revenue does not amount to more than Rs. 2½ crores. The increase of revenue from the forests was continuous until the world economic crisis began in 1930.*

"Revenue in the Forest Department had increased ten-fold in fifty years, and post-war demand and high prices raised it still further to £1,750,000 in Burma and £3,000,000 in India proper with a total surplus of revenue over expenditure of nearly £ 2,000,000. The census returns of 1931 show that the extraction, conversion and utilization of timber gave employment to 1,200,000 people in British

* Forest Revenue (Lakhs of Rupees) :—

Year	Revenue	Expenditure	Surplus
1900-01	... 1.98	1.12	86
1913-14	... 3.33	1.75	1.58
1924-30	... 6.13	3.63	2.50
1930-31	... 4.13	3.52	1.21
1931-32	... 3.96	3.01	95
1932-33	... 3.74	2.88	86

India, and the collection and preparation of minor forest produce to a further 700,000. Teak is the only timber for which there is large demand outside India, but in spite of its relatively high price and the large supply of other timbers available in India the total imports used to exceed exports. Excluding railway sleepers, which are no longer imported, there was before the War an adverse balance of £500,000 in the external timber trade. Larger exports of teak at about double the pre-War value turned the balance of trade considerably in India's favour for a number of years, but since 1931 equilibrium has barely been maintained owing to much smaller demand for teak. Matches were the principal import of manufactured wood before the war, when their value exceeded £500,000 a year; now with the aid of import duties, the match industry of India meets nearly the whole demand."*

The Indian Forest Department has been organized to control and develop the forest resources of the country, and it now controls nearly one-fourth of the total area of India. It has classified the forests into Reserved, Protected and Unclassed State Forests, according to the control exercised by government. A research institute has been established at Dehra Dun and one of the most important results of the work has been to show that bamboos can be utilized for the manufacture of paper pulp in addition to grasses such as Babar and Sabai. The Government of India had under consideration the views expressed during the discussion which took place at the Forestry Conference held in December, 1937 on the subject of the utilization of the produce of Indian forests. As a result they have decided to set up a Board of Forestry to secure close and active liaison between forests and the industry. The functions

* Paper read by A. D. Blascheck before the Royal Society of Arts, London, in December, 1934.

of the Board will be to advise the Forest Research Institute, Dehra Dun, in the selection of particular problems for investigation, on the initiation of such investigations and the best means of making practical and beneficial use of their results.*

ANIMALS

There are as many varieties of animals in India as there are crops. The most important is the bullock ; and other useful animals in the order of their importance are the cow, buffalo, horse, donkey, sheep, goat, and fish. Indian forests and mountains contain a large variety of birds and reptiles, while the importance of livestock in an agricultural country like India cannot be exaggerated. Apart from the use in agriculture of animals, milk and dairy products are of great importance as articles of diet since most of the population are vegetarian. Indian cattle are poor in quality and the possibility of improvement in this respect by proper feeding and breeding deserves considerable attention.

Countries	Number of cattle	Number of cattle
	per sq. mile	per 1,000 people.
British India	... 62	429
United States of America	16	653
United Kingdom	... 99	264
Germany	... 98	322
France	... 69	372
Australia	... 44	2,950
Japan	... 10	25

In 1935 there were in British India, excluding Bengal, Bihar and Orissa, 113 million head of bovine cattle. This figure is over five million higher than that of 1930 but cows recorded a decrease of over one lakh.

The Government is trying both to improve the quality

* *Vide* Government of India Communique dated 16th May, 1939.

and to prevent disease from spreading amongst the animals.

There is an Imperial Veterinary Research Institute at Muktsar where the diseases and epidemics affecting the animals are studied and remedies explored.

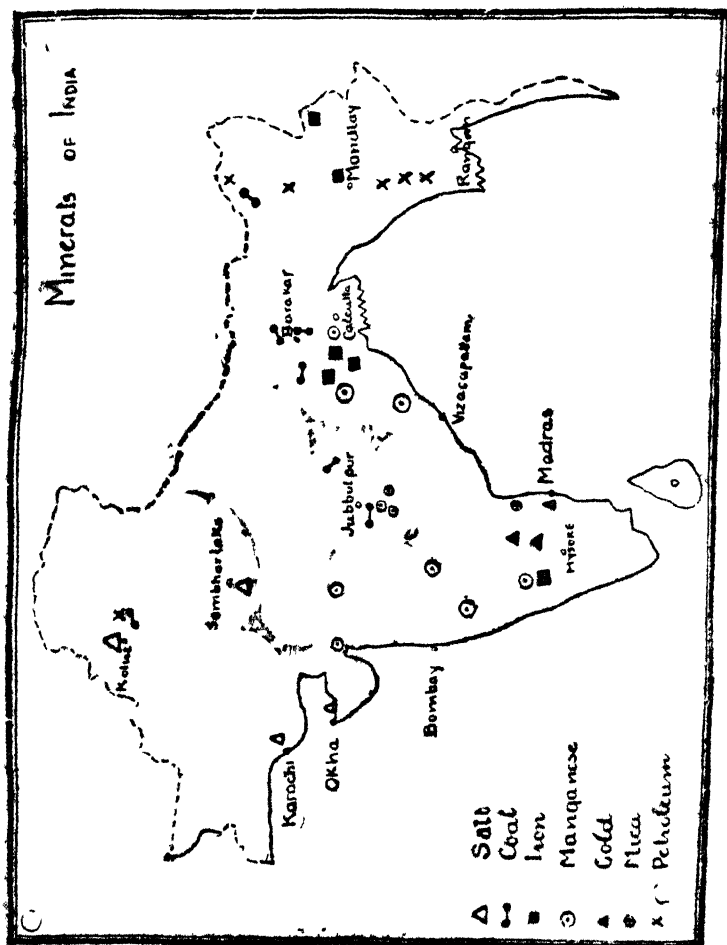
MINERAL WEALTH OF INDIA

The mineral resources of India are by no means small, although not many years ago the common idea was that they were meagre. Recent investigations have led to the discovery and opening-up of many kinds of mineral deposits and the introduction of modern methods of production has also shown that the mineral resources, if not large, are at least sufficient to maintain the present industries of the country.

Coal. Of the minerals, this is of first importance, but unfortunately, most of the deposits are in one zone called the Gondwana System, which stretches east and west right across Bengal, Behar, Orissa, Central India and the Central Provinces. A little coal is produced in Hyderabad and there are unexplored deposits in Assam, the Punjab and Baluchistan. The search by the East Indian Railway Company for a cheaper fuel supply than imported British coal, led to the development of the Indian coal industry and rapid progress has been made. At present over twenty-three million tons are produced annually, but of poorer quality than foreign coal, with which only the Bengal coal can compare and compete.

Iron. Iron ore is mined mostly in Singhbhum, Mayurbhanj and Deonjhar States of Behar and Orissa, Madras and Mysore State. The Baraker Iron Works in Raniganj were the pioneers in this industry and the Tata Iron and Steel Co. started work at Jamshedpur in Behar and Orissa in 1911. The production of pig-iron and iron and steel manufacture in India is steadily increasing and in

1938-39 it amounted to nearly 7'26 lakh tons. The output of pig-iron was 15,76 thousand tons and that of steel ingots 9,77 thousand tons. India exports pig-iron to Japan, the United Kingdom, United States of America, New Zealand, Germany and the Netherlands in small quantities ; the total in 1938-9 was 5,14,000 tons valued at Rs. 256 lakhs.



RESERVES IN TONS PER CAPITA*

<i>Country</i>	<i>Coal</i>	<i>Iron ore (visible)</i>
India ...	235	10
Japan ...	126	1'4
China ...	1,000	2'6
Australia ...	28,000	164
New Zealand ...	2,511	52
Canada ...	71,050	45
United States ...	22,796	87
Union of South Africa	7,464	405

"India is now, in fact, the second largest producer of iron ore in the British Empire, and yields place only to the United Kingdom. Her output is, of course, still small compared with that of the production in the United States (over 31 million tons in 1931 and nearly 10 million tons in 1932), and France, (38 and 27 million tons in 1931 and 1932, respectively); but her reserves of ore are not much less than three-quarters of the estimated total in the United States, and there is every hope that India will eventually take a much more important place among the world's producers of iron ore."†

Petroleum. Petroleum is found in the folded rocks at each end of the Himalayas and Assam and in the Attock District of the Punjab. Burma supplies most of the petrol consumed in India and most of the oil fields there are worked by one company. The consumption of kerosine oil and petrol has increased enormously in India during the last few years; even though the internal output of petroleum increased from 118 million gallons in 1904 to about 322 in 1934, and was of the value of over £4½ million in 1936; still India imports kerosine, petrol and fuel oil from the Union of Socialist Soviet Republics, United States of America, Roumania, Persia and Borneo. India, however,

* Figures given in Thompson's "Danger Spots in World Population," p. 11.

† Record of the Geological Survey of India, Vol. LXVIII, Part 3, p. 934.

exports paraffin wax to the United Kingdom, Netherlands, Belgium, U. S. A. and Germany.

Salt. The consumption of salt was increasing up to 1934 in India but since then has been on a decline. It fell from 19 lakh tons in 1935 to 17 lakh tons in 1936. Seventy-five per cent. of this is produced in the country itself from the four great sources of supply :—

- I. Salt Range and Kohat Mines in the Punjab—Rock Salt.
- II. Sambhar Lake in Rajputana—Brine Salt.
- III. Borders of the lesser Rann of Cutch—Condensed Salt Brine.
- IV. Karachi, Kathiawar Coast and Madras—Sea Salt Factories.

About one-half of the salt produced in India is manufactured by the Government and the remainder by private firms under license. Indigenous salt is subject to an excise duty, levied at Rs. 1-4-0 per maund, and the import duty is Rs. 1-11-6. The question of extending production so as to make India self-supporting in salt is under the consideration of the Government. After the Civil Disobedience campaign in 1930-31, the Government agreed to allow manufacture for private use on the sea-coasts. The production of Indian salt amounted to 1,492,000 tons in 1937 and 1,538,000 tons in 1938. India imported Rs. 55½ lakhs worth of salt in 1937-8 and Rs. 37½ lakhs in 1938-39.

Gold. The most important gold producing area in India is the Kolar field in Eastern Mysore, which produces the bulk of the home supply, the rest coming from the Anantpur field in the Madras Presidency, and the Nizam's mine at Hatli. Production on the Kolar field was for some time on the decline but is now steadily increasing and the total Indian gold output represents about three per cent. of the world's annual supply.

Manganese. This is a very useful industrial mineral which is required largely for the manufacture of steel, but is also used in the chemical, electrical and glass industries. India was at one time the greatest source of the supply of manganese in the world, but now it is being produced in increasing quantities in Russia, the Gold Coast, South Africa and Brazil. In India it is produced in Keonjhar State and the Singhbhum District of Behar and Orissa, Madras and Central Provinces.

Mica. This is another important mineral found at Hazaribagh and Gaya (Behar), Nellore District (Madras Presidency), Ajmer, and Merwara. It is chiefly used in the electrical industry as an insulating medium and India turns out more than half of the world's supply.

Saltpetre. At one time India possessed practically a monopoly of the supply of nitrates used in the manufacture of explosives. Partly owing to the tariff policy of the Government, and partly to the discovery of other substitutes, the production of saltpetre has been reduced. It is a very useful industrial mineral used in the manufacture of glass, as well as in the preservation of food, and for manure. Its production in India is confined to Behar, the United Provinces and the Punjab, and most of it is exported.

Other minerals and precious stones produced in India are silver, lead, zinc, tin, copper, aluminium, jade, chromite, potash, amber, diamonds, rubies and sulphur. Monazite deposits were recently discovered in Travancore, while building stone, magnesia, chalk and lime-stone (used for the manufacture of cement) are also available. The "Portland" cement made in the factories at Wah in the Punjab, Kartni, Jubbulpore, Gwahar and Dwarka is supposed to be equal to the best English lands.

SOURCES OF POWER.

The principal power resources of India are coal, petroleum and hydro-electricity, but as the coal supply is

concentrated in one great series of deposits, the expense of transporting it to the industrial areas, is very high. The coal can be used cheaply only by the Bengal jute and the Behar iron and steel industries. The possibility of utilizing water-power for the generation of electricity has recently opened up a new source of cheap and efficient power, which may, in time, revolutionize not merely large scale, but all industrial production in the country.

With high mountain ranges, bordering several vast stretches of more or less level plains, extending over hundreds of miles, the rainfall and the snows of India provide potential energy equivalent to some thousand million kilowatts. Notwithstanding the disadvantage in not having many perennial streams, enormous quantities of electricity can be produced all over the country at a fraction of the cost of steam, or any other power. The Industrial Commission emphasised the necessity for a hydro-electric survey of the country and this was instituted by the Government of India. More detailed surveys have been carried out by provincial governments and the investigation and conservation of the natural resources have been taken up seriously.

Early installations of hydro-electricity were :—

<i>Year</i>	<i>Place</i>	<i>Purpose</i>
1885	Gokak Falls (South Mahratta).	Runs a few cotton mills.
1897	Darjeeling ...	Supplies light and power for the town and a few tea factories.
1902	Cauvery Falls (Mysore).	Works the goldfield at Kolar.
1904	Nilgiri Hills (Madras)	Runs the Government Cordite Factory.
1909	River Jhelum (Kashmir).	Light and power to Baramula and Srinagar.
1911	Jammu ...	Town use.

Year	Place	Purpose
1913	Basantpur (near Simla).	For use in Simla.
1914	Bhatghar (Poona) ...	Irrigates the neighbouring low-lying land during the <i>rabi</i> crop season.

TATA HYDRO-ELECTRIC WORKS. The greatest water power undertaking in India (and in some respects the greatest in the world) is, however, the Tata Hydro-Electric Scheme for the supply of power to Bombay. On the Western Ghats in the hinterland of Bombay, the rainfall is very heavy (more than 200" a year) and artificial lakes have been constructed to store some of this water which is directed, through pipes, down the steep slopes of the hills. The power thus generated is used to produce electricity which is utilized to drive cotton mills and for other purposes in Bombay. After doing this, the water is used to irrigate the fruit and vegetable gardens of the district. These power works gave a great impetus to manufacturing and proved valuable during the scarcity of coal in war time, when thirty per cent. of the textile mills would have been closed but for these works. In 1922, the Andhra Valley installation was established at Bhivpuri. Of the 21 crores of horse power required by Bombay mills, 11 is supplied by hydro-electricity and there is sufficient power to run, not only the suburban railways of Bombay, but also the main line to Poona.

Madras is favourably situated for hydro-electric schemes as there are two monsoons over a large part of the Province. The first stage of the Pykara Hydro-Electric project which was completed in 1933, consists in utilizing a fall of over 3,000 feet in Pykara River (as it descends from the Nilgiri Plateau) for the generation of electrical energy and its transmission to the neighbouring districts. The second stage was completed in 1938 and further extensions are in progress.

The Mettur Hydro-Electric (Madras Government) Scheme commenced operation in June 1937. The development consists in utilizing the irrigation supplies from the Mettur Reservoir for the generation of power for the districts of Salem, Trichinopoly, Tanjore, North Arcot, South Arcot and Chittoor. The Madras Government propose to commence the Papanasam Hydro-electric Scheme in 1941.

Assam has more than sufficient potential power to run all its tea industries. In Bengal, coal is cheap, but there is much water power available in its Himalayan area. In Behar and Orissa and Central Provinces there is not much prospect of water-power development.

UNITED PROVINCES. Hydro-electricity is produced from the falls of Ganges Canal at Bahadurabad, Bhola near Meerut, Palra near Bulandshahr and Sunera near Aligarh. These four power stations are connected with one another in a grid so that if one station is closed for repairs, etc., electricity may be supplied from another station without interruption. This grid supplies electricity to about 60 towns of the Meerut Division and covers an area of some 10,000 square miles. The principal towns receiving electricity from the grid are Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Hathras, Khurja, Hardwar, Bijnor, Nagina, Najibabad, Moradabad, Chandausi, Sambhal and Amroha. The charges per unit for electricity are as follows :—

	<i>As. ps.</i>
Light and fans	5—6
Minor industries ..	1—6
Irrigation and other agricultural purposes	1—0

EFFECT OF THE SCHEME. It provides cheap power at suitable points for pumping water from rivers and tube-

wells for irrigation purposes, *e. g.*, water pumped from the Kali Nadi near Aligarh for irrigating about 20,000 acres of land; it is also pumped from the Ramganga river at Seohara, and on the Moradabad line for irrigating about a lakh acres of land in the Bijnor and Moradabad districts. There are a number of state and private tube-wells, which are worked by this supply for irrigating sugar and wheat lands. It is also used in such agricultural industry as sugar crushing, refining, cotton ginning and chaff cutting. Investigations into the electrical and financial possibilities of a grid project for the eastern districts of the province have been completed and recommendations of an expert committee, appointed in November, 1937, are under consideration.

In the North-West Frontier Province, there has been no survey, as the country is too unsettled yet for industrial development, but at Swat there exists a great source of energy. Burma has much power available but is hampered by lack of good roads, as well as enterprise and funds.

The Punjab is very deficient in coal. During 1914-18 the price was so high owing to the enormously increased military traffic, that it was thought wise at that time to tap an alternative source of power. The province, along with the adjoining states, possesses vast quantities of water power, capable of economic development and is thus as richly endowed as Behar and Orissa in the most important of raw materials—energy. In the Punjab, however, it is water, not coal.

After much controversy in the Punjab Legislative Council, the Mandi Project was preferred to the Sutlej, Madhopore, and other schemes surveyed. Work was begun in March, 1926, and the first stage was completed in 1933 when electricity was supplied to some of the towns of the Punjab. The Kangra Valley Railway, which was necessary

for transporting machinery and other material to Jogindar Nagar, the site of the power house, was completed in 1928.

Use is made of the snow-fed waters of the river Uhl, a tributary of the Beas, which joins the latter in Mandi State, about five miles east of Mandi town. In the first stage the water of the Uhl river is diverted through a tunnel nine feet in diameter, and over $2\frac{1}{2}$ miles long ; it is then carried in pipes through a fall of 1800 feet to the power station at Jogindar Nagar where about 33,000 kilowatts of electricity are produced. In the second stage a dam 260 feet high will be constructed in the River Uhl and a much larger quantity of water will be allowed to pass through the tunnel ; then the electric power produced can be increased to 70,000 kilowatts. In the third stage, the water at Jogindar Nagar will be taken in an open channel for three miles and then over a second fall of 1200 feet, where it can generate 48,000 kilowatts at a second power house. Thus the total energy produced when all three stages are complete will be 1,18,000 kilowatts, which is quite sufficient for the present industrial and domestic demand of the whole of the Punjab.

So far only the first stage has been completed. The revenue and annual operating expenses, including maintenance, depreciation and interest are expected to balance in the twelfth year of actual working. The power may be used for pumping water for irrigation and sewage work, as well as for gradual industrial development.

On the completion of the whole scheme, motor power should be available to the individual manufacturer at half, or even less than half, its present cost. The lighting and heating requirements of every householder should be fulfilled at about four annas and nine pies per unit respectively. Every bazar shopkeeper should then be able

to have his own lamp at a cost of about one rupee a month, a result which is not obtainable from any existing plant. It is estimated that capital expenditure on motive power will be reduced to less than half its present cost and this should be a great inducement to industrial development. The pressing of oil-seeds, sugar-making, cotton and woollen manufacture, rice-husking and flour mills should be more profitable and many mill-owners have agreed to buy electricity for power when it is available at the suggested figure of nine pies per unit.

The Mandi Scheme should ensure the power supply of the eastern half of the province for a generation and the price should not increase but rather fall as time goes on. The Kangra Valley Railway has opened up many highly cultivated tracts, with a population density exceeding 400 per square mile in cultivated areas. This was probably the only opportunity for the railway to be opened in this delightful valley, which is thus thrown open, to tourists and pilgrims, and the fruit products of the valley can be transported and marketed easily. As the project develops, the railway of the region may be electrified, although this depends on many other factors.

Recent investigations indicate that a good site for further extension of hydro-electricity in the Punjab is at Hazro near Campbellpur. This would be sufficient for the Northern Punjab and North West Frontier Province, especially if the scheme is followed by the suggested Rasul Project, and one on the Swat river near Malakand.

MEANS OF COMMUNICATION AND TRANSPORT

Next to natural resources, the means of communication and transport play the greatest part in the production of a country. We have seen that all industry consists really in moving materials from one place to another; even changing

the form and shape of something is, at bottom, simply a case of moving matter.* Transport, then must form an important part of the industrial system of any country : it has been likened to the veins and arteries, just as the telegraph and telephone systems have been likened to the nerves, of the human body. The development of large scale production is impossible without cheap transport and the provision of such facilities has contributed to a considerable degree in the expansion of trade and commerce in India ; cheap transport has created wide markets and stimulated production by placing commodities within easy reach of consumers ; distance has been annihilated ; raw materials can be carried long distances ; coal and iron are brought nearer to each other ; surplus produce of one place can be sold in another district where it can command a profit ; grain can be carried from a district where there is a good crop, to a famine-stricken area and the dangers of famine have been largely averted. Easy, fast and cheap transport and communication are essential for the growth of civilization.

Although the vast Indo-Gangetic Plain can be easily traversed during the dry season, it has proved exceptionally difficult and expensive to introduce improved means of transport in India. Hence, until the middle of the nineteenth century, it was carried on by means of pack animals, palanquins, bullock carts, small river craft and little coasting sailing vessels. Less than a century ago there were only rough country tracks ; roads in the modern sense of the term were unknown. The obstacles to the introduction of good roads were—

1. Flooded rivers during the rainy season and hence difficulties in bridge-building ; the engineering obstacles to be overcome were by no means negligible.

Northern India possesses little or no suitable material for road-building and it was only in 1829 that an effort was made to connect Calcutta with Delhi by means of a good, metalled road. Progress was hampered by financial difficulties and consequently this famous Grand Trunk Road was made in sections; parts of it were forced on the Government by military exigencies. At first these roads were controlled by the military authorities, but in 1840 the Public Works Department was organized and took charge of roads. Since then road-making has proceeded methodically and the upkeep of roads attended to properly.

Since 1960 the mileage of metalled, or first-class, roads in the country has risen from 37,000 to 69,000. Out of these 5000 miles in the length of the four Grand Trunk Roads—(1) The Grand Trunk Road from Khyber to Calcutta, (2) from Calcutta to Madras, (3) from Madras to Bombay, (4) from Bombay to Delhi. None of these can be considered safe all weather trunk roads according to modern standards. The second-class roads are not provided with bridges and the third-class are only passable during the dry months. First-class roads are under the control of the Imperial Government and the others under the various local authorities; only the former are fit for motor traffic and India is still very backward in the matter of good roads. Traffic on them has increased considerably since the introduction of motor lorries and this has led to their rapid deterioration, but a Central Road Fund has been instituted for road maintenance and improvement. Until recently roads in India were merely feeders of the railways, to which the motor traffic is now beginning to be a serious competitor, especially for short-distance traffic.

Railways.

In the middle of the nineteenth century it was realized that there could be no material progress for the people, nor

efficient administration of the country, unless and until, a regular system of railways was set up in India

The initial difficulties in the way of railway construction appeared to be insuperable. A vast amount of capital outlay was required for such a gigantic task ; how could people, especially capitalists in England, be attracted, to invest in this new and untried venture ? The floods and storms of India presented special obstacles to construction ; machinery had to be imported from abroad ; skilled labour was not available in the country. These were some of the main problems which had to be solved and various methods were tried before a satisfactory railway system could be provided.

GUARANTEE SYSTEM. This was devised originally to secure the requisite capital and enterprise. The government guaranteed a free grant of land for 99 years and a five per cent. rate of interest on capital expenditure ; it had the right to :—

1. Control expenditure and operation ;
2. Purchase the undertaking after 25 years at a stated price ;
3. Send mails and troops free of charge ;
4. Share in the surplus profits.

The first twenty miles of the Great Indian Peninsular Railway were opened in 1853 and of the E. I. R. in 1854. By 1860 contracts had been made with eight railway companies and the construction of tracks sanctioned. The results, however, were disappointing for some time ; the companies neither made profits, nor met the guaranteed interest during the earlier years of operation and the guarantee system proved a heavy burden on the government finances.

STATE OWNERSHIP. The government itself then began to undertake the construction of railways and a few lines were

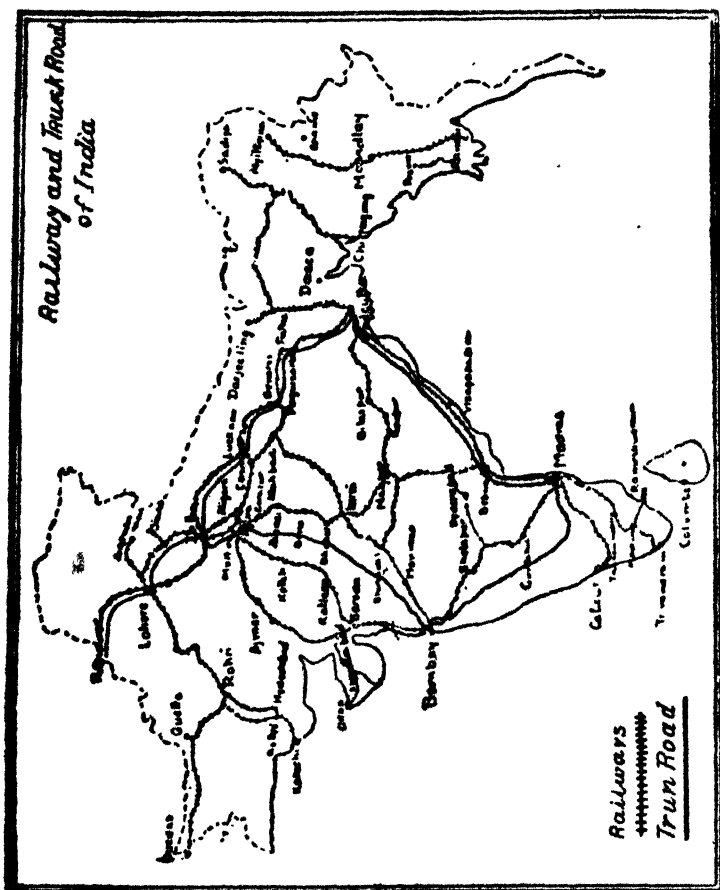
provided for strategic and military purposes, but funds were not available to any extent owing to wars and famines. The Indus Valley and Punjab Railways were the lines thus constructed and these were later amalgamated as the North Western Railway.

NEW GUARANTEE SYSTEM. Government construction of railways was soon abandoned and efforts were made to induce companies to enter the field again, but this time without state assistance. This attempt, however, met with no success and the government had to fall back on a new guarantee, under which it borrowed the money and then advanced part of the capital for railway construction for which interest was charged by the government. It also guaranteed the interest (usually $3\frac{1}{2}$ per cent) on the balance of the capital raised by a railway company. Now the government owns the railways of the country in most cases, and the companies working the lines are lessées for a term of years.

These were the early methods by which railway construction was effected in India and in addition there are railways owned and managed by Indian states. There is also what is known as the Programme System which was introduced after 1900 when the railways began to prove remunerative and the Government began to apply its own funds for their extension. A definite sum was allotted annually for construction, and since 1911 railway mileage has increased considerably. In 1913-14 there were 34,656 miles of railway : it rose to 43,128 on 31st March 1937 and of this 72 per cent was state-owned. The only important lines not owned by the state are the Southern Punjab, Bengal and North Western. Within the next twenty years the government will have the right to purchase all the existing railway lines in India.

The great railway systems of the country run inland from the chief ports and those of the north and north-west converge on Delhi. A definite programme of extension is

badly needed as the country is very poorly provided with railways compared with other countries such as England, where there are 195 miles of railway for every 100 sq. miles of area : in India there are only 2 miles for a similar area.



ROAD AND RAIL CO-ORDINATION. The road-rail problem is international in its application and scope and is present in India in one of the most urgent forms. Nearly one-half of the total mileage of railways in British India has a metalled road running parallel to, and within ten miles of, it. So far, the competition has been mainly confined to

passenger traffic, but with trade revival, better organization of motor transport and the improvements of the roads parallel to the railways, competition in the carriage of merchandise may also arise unless some co-ordination and co-operation is devised. Owing to this competition the railways lost in some years about Rs. 19 millions annually, or slightly under 2 per cent. of the earnings of a normal year. The development of motor transport has, however, brought considerable business to the railways in the transport of petrol, vehicles, and accessories. A Road-Rail Conference was convened by government in April 1933 which recommended that "suitable machinery should be established at the centre and in the provinces to ensure adequate co-ordination between all forms of transport and their future development." so that both these important means of transport should develop with mutual advantage instead of in competition with each other. With a view to co-ordinating the different means of communications a portfolio for communications has been formed with effect from November 1937, the member incharge of which is responsible for roads and railways as well as inland navigation, aviation, telegraphs, etc.

Roads and railways have revolutionized the methods of transport in India (as in all other countries) and have been the chief factors in extending the volume and variety of trade of the country. Before their introduction the small shops of individual handicraftsmen supplied the needs of a town or a village which was economically self-sufficient; now specialized production for a market has been introduced; it has become possible to establish large-scale industries and the isolated self-sufficiency of the village is breaking down. There is a world price for most of the staple commodities, whereas previously, prices fluctuated from district to district. Railways have been the chief cause of the present general economic transition.

Water Transport.

Before the advent of iron and steel ships, India had a considerable mercantile marine and a flourishing ship-building industry, but now India's foreign trade is almost entirely in the hands of British ship-owners. Native, wooden, sailing craft are still constructed and engage in the coastal trade, but it has been estimated that only 12 per cent. of the coastal trade and 2 per cent. of the foreign trade of the country is carried in Indian ships.

NATURAL RESOURCES OF THE PUNJAB

The natural resources of the Punjab consist of

- (1) Minerals.
- (2) Forests.
- (3) Hydro-electric power.
- (4) Soil—agricultural resources.
- (5) Rivers on which the canal system of the Punjab depends.

Minerals.

The Punjab is rather poor in economic minerals. Its chief asset lies in the agricultural wealth of its soil. The useful minerals of the Punjab may be considered under the following heads :—

- (1) Fuel, coal and petroleum.
- (2) Rock salt.
- (3) Gypsum and Alum.
- (4) Sands and Clays.
- (5) Lime and Cement
- (6) Building stone.

Coal is found in the Eastern Salt Range at Dandot and at Makarwal in the Mianwali District in the Trans-Indus extension of the Salt Range. The coal seams are very thin and the coal is of inferior quality. The total amount produced today has increased from 43,000 tons ten years ago to 140,000 tons. It is used in the local indus-

tries of cement manufacture and its value lies in the fact that high transport prices are paid on the coal imported from Bihar a distance of 800 miles.

Petroleum is found at Khaur and Dhulian near Pindigheb in the Attock district. These two oil fields since their discovery in 1914 have yielded over 3 million barrels of oil. Some of the wells are as much as 7500 feet deep. The present yield, 4.5 million gallons per annum shows a recovery after a serious fall in production since 1929 when more than 19 million gallons used to be the annual production.

Rock Salt. Since the days of Akbar salt has been obtained from the Salt Range at Khewra and other places. The rock salt deposits of the Salt Range constitute an immense source of pure crystalline sodium chloride. At Khewra two beds of pure salt 550 feet thick intervened with a bed of red marly clay and gypsum. The salt is mainly mined at Khewra which is 140 miles by rail from Lahore. Smaller mines are mined at Warcha and Kalabagh. Salt deposits also exist in the Mandi State in the Kangra hill.

The total production of salt in the Punjab is 170,000 tons annually. But the reserves of salt in the Punjab are immense and the production can be greatly increased. At present the manufacture of salt from the sea water at Karachi, Kathiawar coast and at Madras, and at Sambhar lake, which is cheaper and is situated at more favourable places stands in the way of extension of production at Khewra.

Gypsum which is used in the manufacture of plaster of Paris and a little in the manufacture of Cement, is found in very large quantities associated with rock salt.

Alum. Some eighty years ago a very large quantity of alum was manufactured at Dandot and Kalabagh from

the slabs found there. Now on account of the importation of cheap chemically manufactured alum the industry has altogether died.

Building Stones Rocks when easily dressable and of good quality and durability, colour and texture are quarried for use as building material for important public and private buildings. Stones of excellent quality suitable for such use are obtainable in very large quantities from the Salt Range and in lesser quantities from the Kala Chitta and Margala hills near Rawalpindi. As for hundreds of miles in the Punjab no stone suitable for building is obtainable this source is of great potential value. In the Narnaul district of Patiala, situated in the south-east of the Punjab black lime stones well suited for building and lime manufacture have been in use.

Slates are used as tiles, slabs etc. In the Punjab slates of good quality are found in the Kangra quarries on the southern side of the Dhauladhar Range and the quarries of Rewari in the Gurgaon district. Large reserves exist at both these localities and with improved methods of dressing and marketing the industry has a great future.

Lime Stone is mostly used for mortar making and is obtained in very large quantities in the Salt Range and the Rawalpindi Plateau. Mortar is also made from *Kankar* which is found in large quantities in the plains of the Punjab. Kankar is the chief material used for road making in the Punjab.

Cement Manufacture. The Punjab contains pure lime stone in very large quantities for cement making in the Salt Range, Mangla hills and the Kala Chitta hills and the beds of clays are found in the vicinity—hence cement factories have been established at Wah and at Dandot.

Sand. Pure quartz sand free from all iron impurities and possessing a uniform grain and texture is of economic

value in the manufacture of glass. Such sands occur only in the Hoshiarpur district *i.e.*, at Fajon Doaba. A lesser source of this sand is in the granular sand stone found in the Eastern Salt Range. Crushed quartz has been put to use for the manufacture of glass at Ambala city.

The Punjab also contains any amount of coarse clays which is used in making bricks, tiles etc.

Ores. The Punjab is poor in the metalliferous deposits of economic value. It has practically no copper, lead, tin and zinc.

Iron ore. Very good iron ore occurs in Kulu, Kangra and Sirmur in the north east of the Punjab. But it is not extracted on account of there being no coal and lime stone near it and communications being very difficult.

Iron Pyrites *i. e.*, sulphide of iron. This is used as a source of sulphur in the manufacture of sulphuric acid. It is found associated with coal

Gold. The sands of the river Indus are known to contain gold particles and gold washing of the sands has been carried on for many centuries at Attock, Kalabagh, and at the junction of the river Soan with the river Indus. But the quantity of gold obtained has been barely enough to give the days' wage to a whole family of workers.

The Forests of the Punjab. There are 6078 square miles of forests land in the Punjab or 6·7 per cent of the total area of the Province. Small as the total area of the forest is as compared with other provinces the position from the economic point of view is still unsatisfactory because only a small area of forests can be profitably exploited. Forests supply timber and fire wood and minor produce such as bamboo, leaves, fruits, fibres, grass, gums, resins, barks, animal and mineral products. The forests of the Punjab have led to the establishment of the following industries :

- (a) Furniture industry of Lahore and Kartarpur.
- (b) Sports industry of Sialkot.
- (c) Paper manufacture at Jagadhari.
- (d) Resin factory at Jallo.
- (e) Match factory at Snahdara.

There is however great scope for the establishment of other industries. At present only 10 per cent of the forest resources are utilised ; 90 per cent go waste

But the forests of the Punjab are a great national asset in so far as they conserve the water supply of the province on which the prosperity of the people depends.

The other natural resources of the Punjab such as Hydro-electric power, soil and the river and canal systems are already described in the book in detail.

SUMMARY

India is a continent rather than a country. There is a population of 353 millions and a great diversity not only of physical features but also of races, religions and languages. The country is, however, becoming progressively a single economic unit.

It is cut off from the rest of the world by the high mountain wall of the Himalayas on the north and by the sea on the other three sides. The coastline is, however, regular and there are very few good harbours. The bulk of the trade passes through the four ports of Calcutta, Bombay, Madras and Karachi, and even these have not good natural harbours. Most of the carrying trade of India is in the hands of foreigners though efforts are now being made to encourage the growth of an Indian mercantile marine.

There are four distinct geographical divisions of India, viz :—

(i) Himalayas. These form the largest and loftiest mountain range in the world and present a variety of animal and vegetable products, forest wealth, sources of water power and minerals, beautiful scenery and almost every variety of climate. They also supply perennial sources of water and silt to the rivers, protect the Indian plains from the dry winds of Tibet and cause rain by acting as a barrier against the monsoons. They have profoundly affected the life and the culture of the people.

(ii) Indo-Gangetic Plain. This is a vast stretch of level, alluvial land in the north, which has been a home of civilization for centuries. It is a very fertile agricultural plain, well watered in most places and provided with good facilities for agriculture, irrigation and communication.

(iii) Deccan Plateau. This is a vast table-land traversed by rivers and narrow valleys and has a fertile black soil. The rains are sufficient for good cultivation.

(iv) Narrow strips of coastal plains on both sides of the Deccan Plateau, which contain some of the most fertile and best watered districts of India.

There are four kinds of soils found in the country : Alluvial, Black Cotton, Red and Laterite ; the first two are very important economically

The climate of India has considerably influenced the character and efficiency of the people, and the prosperity of the country is bound up with the sufficiency and regularity of rainfall. Most of the rain falls in the

months from June to September and is caused by the periodic moisture-bearing winds blowing from the seas called the South-West Monsoon. The winter rains are carried by the North-East Monsoon, which blows over some parts of the country from October to December.

The two chief harvests of India coincide with the monsoons. India has a variety of food and non-food crops. The former cover about 80 per cent of the sown area and the chief of them are rice, wheat, barley, millet, pulses and sugar. The non-food crops consist of fibres, (among which cotton and jute are very important), oil seeds (such as linseed, sesamum, and rapeseed), indigo, tea, coffee, opium and tobacco.

The yield per acre in India is very low as compared with other countries as the illiterate Indian farmer does not use improved seed, or the best methods of cultivation.

India has an abundance and variety of natural forests which not only provide timber, fuel and other materials for industries such as paper, resin, and turpentine, but also render the climate of the country more equable; they also affect the flow of rivers and rainfall. The Indian Forest Department has undertaken the production and conservation of forests as well as scientific research for the development of forest industries.

There is a great variety of livestock in the country, with the cow and bullock as the most useful animals.

The mineral resources of the country are by no means small, though Indian coal is poorer in quality than English, and most of the deposits are found in the Gondwana zone; iron ore is found at some distance from the coal deposits and petroleum is found in the North-West and in Burma.

The possibilities of hydro-electric power development and the utilization of electricity to run machinery have been explored. Several installations have been made and some important projects are in progress, including the Mandi Hydro-Electric Scheme in the Punjab, which is of great importance.

The means of communication in India have been developed, though first class roads are still very few, owing to the scarcity of good building materials. The early efforts at railway development seemed to be risky, but their construction has proved very remunerative in many ways. About 40,000 miles of railway have been laid down under different systems of guarantee, or direct state control, and most lines are now owned by the State. The railways and motor transport have revolutionized the economic life of the people and hence broken the isolation and self-sufficiency of the village.

Questions and Exercises

1. What is the total population of the world? What is the approximate population of the following countries: India, Great Britain, United States, Japan? What is the effect of physical features on (a) the growth of population, (b) the density and distribution of population?
2. What is the length of India's coast line compared with the length of its boundary line? What is that of England?
3. What were the old trade routes of India? What are the new ones? What would be the effect of opening up India's connection with Europe by means of railways?
4. Is India an economic unit?

5. What are the most important ports of India and what is the extent of the trade passing through each ?

6. Give a description of the Vizagapatam Harbour. What was the need for this harbour and what is the effect of its construction on India's trade ?

7. Write a note on Haji's Coastal Traffic Bill. Why was it rejected by the Legislative Assembly ?

8. What is the Economic importance of the River Ganges ? Why has it been called the wealth of India ? Compare its position and importance with that of the Thames in England, the Mississippi in America and the Danube in Europe

9. Draw a map showing the location of the different kinds of soils in India ; give the characteristic products of each kind.

10. How are the alluvial soils formed ? What is their chief virtue ? Where are they found in India and why ? Are the plains with alluvial soil well fitted for road building ? Discuss the value of the plains of India for purposes of (i) irrigation, (ii) providing means of transport.

11. What are the special features of the rainfall of India ? Draw a map of the country showing the distribution of rainfall and indicating the causes of the differences. Has rainfall any connection with the density, distribution and growth of population in India ?

12. Name the two monsoons of India and describe their course. Clearly bring out their importance to the economic life of the country.

(P. U. 1938)

13. Why is irrigation more necessary in India than in any other country of the world ?

14. Can you account for the heavy fall in the price of wheat in India in the year 1929-31 ?

15. Write a note on the present condition of the sugar industry in India.

16. What possibilities are there for the development of fruit cultivation in India and along what lines does the industry require improvement ?

17. Discuss the economic aspect of the discovery and manufacture of vegetable ghee in India ?

18. What is the difference between *Desi* and American cotton ? Where and with what results has the latter been grown in India ?

19. Has India any rivals in jute production ?

20. What are the uses of indigo and what are the prospects of the industry in India ?

21. Name the chief tea-growing areas of India ?

22. Why are cigarettes mostly imported from abroad and from what countries ?

23. Write an essay discussing from an economic point of view either the cow, or the bullock, in India.

24. Draw a map of India showing the development and distribution of hydro-electricity and other power resources of the country.

25. Enumerate the sources of power available in India. To what extent has the development of hydro-electricity gone in the Punjab and with what results ?

(P. U. 1938)

26. What is the effect of the development of hydro-electric power on industries? Write a note on the Maandi Hydro-Electric Scheme.

27. What were the difficulties in the way of building (a) railways, (b) roads in India?

28. What is the present position of the Indian railways? Describe the biggest railway system, and discuss the economic advantages of railways with special reference to India.

29. How are railways financed and managed in India? Why has railway finance been separated from the general finance of the country?

30. Describe the distribution of forests in India and show their effect on (a) agriculture, and (b) industries.

31. What do you think of the means of transport in rural areas in India? Has the motor lorry been successful against the Indian bullock cart? (P. U. 1935)

32. Write a careful note on the economic value of the great rivers of India. (P. U. 1934)

33. What are the principal mineral products of Assam, Burma, Behar and the Punjab? (Special credit for drawing a map illustrating the answer.) (P. U. 1934)

34. Give the main features of Indian Geography and explain their bearing on the economic life of the country. (P. U. 1936)

35. In what way has the development of the means of communication and transport affected village economy in the Punjab? Illustrate your answer by reference to a village of which you have knowledge. (P. U. 1935, & 37)

36. What is the meaning of production in Economics? How is the efficiency in production of wealth in India affected by (i) the cult of charkha, (ii) the presence of the Himalayas, (iii) the system of education now prevailing in India and (iv) Land Alienation Act. (P. U. 1914)

37. What are the monsoons? What is their importance in India's economic life?

Show how the failure of the monsoons will affect the following:—

(a) Price of agricultural crops.

(b) Government revenues.

(c) Exports.

38. Into a village, rather far from Lahore, the following are introduced: cheap electricity, simple machinery, good roads and a cheap motor bus service to Lahore. What improvements would you expect in production and consumption? (P. U. 1939)

39. Where are the following found in the Punjab and what are the industries to which they give rise: rock salt, wheat, cattle and goats and forests? (P. U. 1939)

40. How far is India fitted by nature for industrialization? In this connection describe the natural resources of the country. (P. U. 1938)

CHAPTER X

TRADE AND PRODUCTS OF THE LEADING COUNTRIES OF THE WORLD

Commerce is the exchange of commodities that are desired by man ; it is the means by which a country makes the best use of its natural resources. These can only be used to the best advantage if the country confines itself to the production of articles for which it is most fitted, or in which it has the greatest *relative* advantage, and this it can do only if it can secure the products of other countries by exchange. In a country such as Great Britain, for example, where the natural products are practically limited to pasture land and minerals, it would be impossible for the *present* population to live without co-operation with other countries. The world is becoming one economic unit and no country can remain isolated without lowering the standard of living, not only of its own people, but of the rest of the world ; hence the desirability of each country contributing its best to the wealth of the world. To do this each must develop its economic resources to the fullest extent if it is to benefit its own people, as well as others, by economic co-operation. Modern civilization requires products from each of the climatic regions of the world and international trade is essentially an exchange between regions of diverse geographical character.*

A review of the trade and products of the leading countries of the world will show how gifted, energetic and enterprising nations are making use of their resources ; how education, organisation and the development of the

* The British Empire is the only single political unit in the world which includes within its own boundaries a portion of each of the major geographical regions of the world. It can, therefore, become a large economic unit, self-supporting and self-contained, but though rich in coal it is likely to remain relatively poor in mineral oil.

means of communication have led to economic advancement.

Great Britain.

As we have indicated above, Great Britain is very deficient in natural products, except minerals; the country cannot produce sufficient food for the large number of people who live in its small area. Even though climatically suited for cattle and dairy products, considerable quantities of meat and dairy produce are imported from Ireland, Holland and Denmark, because the internal supply is not sufficient to meet the demand of the large population. The difficulty of obtaining the necessary food has supplied the people with a motive for energy and industry; probably they stand unrivalled for the display of human activity in all its forms, moral, mental and material. The soil and position encourage manufactures and commerce; isolation has made the people depend not entirely on their own resources, but has impelled them to develop foreign trade. The presence of coal, iron and lime-stone near to each other, the indented character of the coast line, the natural facilities for means of communication and the position in the centre of the world (near enough Europe to use it, and yet far enough to be free from most of its earlier wars and pestilences) the temperate and equable climate, all these have helped to give Britain a leading place in the industrial world.

The agricultural products of the country—oats, wheat, barley, potatoes and turnips are of relatively little importance and the area devoted to them is declining. Flax and wool are the only fibres produced; large quantities of cotton, jute, hemp, skins and wool are imported. Textiles, coal and iron are the largest industries; the foreign commerce of Great Britain is much greater in value per head than that of any other country. Large quantities of British exports consist of goods that have first been

imported, *i.e.*, it has a big entrepot trade.* The textile industries account for about one-fourth in value of the English exports, and the other exports are mostly iron and steel manufactures (including steam engines and machinery) metal wares and coal.

Germany.

Next to England, Germany is the greatest commercial country in Europe. The great plain of northern Germany has little fertility and scant mineral wealth, but the other regions consist mainly of hilly country and tablelands where the soil is fertile and the climate favourable for cultivation; here also there is an abundance of coal and iron. The country possesses a large number of natural, as well as artificial, inland water-ways, a good railway system and many good natural harbours.

Germany presents the supreme example of a country owing her industrial advancement largely to good commercial and technical education and to the application of science to industry. The preparation of synthetic dyes has hit the growth of indigo of India very hard and this is only one instance of the use of science in industry by the people of Germany who have such a wonderful capacity for attention to detail. Since 1871 rapid progress has been made in the coal, iron and steel trades while manufactures have increased enormously. There has been a great increase in the imports of raw silk and in the export of silk manufactures; this has been chiefly due to the manufacture, by mass production methods, of cheaper kinds of silk that are made in France. The growth of the export of beetroot sugar has been partly due to state bounties and Germany now provides about one-fourth of the sugar supplies of the world. German merchants

* *Entrepot trade consists in exporting goods in exactly the same state as they were imported. For example, Holland imports spices, rubber and tin from her colonial possessions in the East Indies, and exports them in the same state to Germany, Belgium and other countries.*

employ large numbers of well-qualified travellers to procure trade in foreign countries and they often have the gift of suggesting new wants for people of other countries and then being ready with the articles to meet such wants. All this was before 1934 when very serious restrictions were placed on foreign trade by the Nazi Government. So much money and effort was spent on re-arming the country that little or no margin was left for the purchase of other commodities from abroad. Having built up a strong military power under the leadership of Herr Hitler, Germany began to extend her territories by military occupation of neighbouring countries. Within a short time the Saar, Austria, Sudetenland and the Czech provinces of Bohemia and Moravia were annexed. The size of Greater Germany thereby increased 635,000 sq. km. with, a total population of 85 millions. Some of the acquired territories are far from having been digested economically by Germany. Yet on the whole the addition is considered to have strengthened the economic structure of the country but without changing it fundamentally especially in respect of food-stuffs and raw materials. The new territories contain a fair quantity of coal and other minerals together with agricultural districts. She has gained possession of important industries such as Skoda Works, Pilsener Breweries and Bata factories. The main new asset is in the well-organised metallurgical and armament industries.

France.

France has neither many natural harbours nor good navigable rivers; the country produces much coal but of inferior quality to that of England. It is a good agricultural country and the home of small farmers, with the vine as the most valuable of all French crops. Wheat, maize, rye and potatoes are also grown, but mostly for home consumption, and beetroot is the chief commercial crop.

Although there are large scale industries in motor cars, firearms, oil, soap, scents, and candles, the chief industries

of France are those which require great skill and good taste. The quality of silk and other textile manufactures excels those of most other countries, owing to the fact that, much of French industry is carried on by hand and such products can stand against machine competition only if they excel in quality and are artistic in design. Thus although France exports manufactured goods and imports raw materials and foods, she is not a great factor in the world trade.

Switzerland.

Before the Great War, Switzerland was the only European country without any sea coast, but now there are others. The relief is mountainous and communication is difficult. As a result of the heavy rain and snowfall, there are excellent pastures on the hillsides and cattle-rearing is the only branch of agriculture that yields considerable export products, such as living animals, butter, cheese, and condensed milk. For manufactures and handicrafts, Switzerland possesses little coal and iron, but has an abundance of water-power and cheap, skilled labour. The government has done much in the way of providing efficient technical education and developing the water-power resources. Swiss watches are famous all over the world. The beautiful scenery attracts thousands of visitors; every year; these contribute much to the wealth of the country, and hotel keeping has thus grown into an important industry.

United States of America.

The U. S. A. presents a good example of a people whose energy has not been minimised by the possession of rich natural resources; great use has been made of them and the country bids fair to become (if it is not so already) the greatest industrial and commercial nation in the world. The broken landscape, low mountain ranges, and the smaller rivers of the Atlantic sea-board, the great fertile valley of the Mississippi and its tributaries, the vast plains

of the West, the semi-desert conditions of the South-West, the towering mountain ranges of the Rockies, and a mild climate and gentle slopes of the Pacific coast, present many varieties of natural physical conditions. Beneath the soil there is an abundance of mineral wealth; coal and petroleum abound, along with some of the richest and most extensive iron beds in the world. Transport is easy and relatively cheap. The U. S. A. is the largest producer of corn, cotton, wheat, petroleum, tobacco, iron and steel, in the world. The chief cause of its former agricultural prosperity was the general use of farm machinery applied to splendid natural resources. The country probably surpasses all others in the use of mechanical inventions and scientific management, which make the control of huge concerns possible. The chief manufactures are iron and steel, cotton and woollen goods, woodwork, leather and paper, and it is scarcely possible to mention any manufactured article that is not made in the country. Raw cotton, wheat, and wheat flour, make up nearly one-third of the total exports, and others which may be mentioned are iron and steel manufactures, maize, meat, mineral oil, timber, and manufactures of wood, copper, tobacco and living animals. Sugar and other tropical products, such as coffee, rubber and jute, form a large proportion of the imports; hides and skins, chemicals, raw silk, cotton manufactures, glass, woollen manufactures, fruit and tea are also imported. The need for tropical products has influenced the foreign policy of the country. The U. S. A. influence in Cuba (the greatest sugarcane exporter in the world), and in the neighbouring tropical islands of the West Indies, is based on a desire to control certain sources of tropical products. Britain is the country with which the U. S. A. does the largest trade. It is interesting to note the character of the trade with countries such as Argentina and Australia, both of which lie in similar

latitudes to the U. S. A. The purchases of their products are very limited, but the sale of manufactured goods to the more recently developed areas is much greater.

Japan.

Japan has been called the British Isles of the East, but this phrase should be used with care. Both countries are situated near continents and are rich in minerals, but they are different in the character of the relief and climate and therefore in their principal products. The group of islands called Japan is highly volcanic and the surface is mountainous and irregular. The mountains hinder internal communication and limit the cultivable land to one-sixth of the total area.

Since the Meiji revolution of 1868, the Japanese have been making every effort to get abreast of the most advanced European countries in methods of production and transport. In spite of natural difficulties, several thousand miles of railway, as well as a good mercantile marine, have been built. Machine, cotton and rayon spinning and weaving factories worked by machinery have also been erected; machine-made Japanese matches are now supplanting Swedish matches in China, and in the East generally. Great iron and steel works have been established, although most of the iron ore has to be obtained from Manchuria (now under Japanese control) and India.

The chief imports into Japan are raw cotton, manufactured iron goods and machinery, grain and flour. The principal exports are raw-silk and silk manufactures, coal, tea, rice, cotton and rayon manufactures, matches, lacquerware and paper. Japan is superseding European countries in many of the world's markets owing to the cheapness of her manufactured goods; the mills work longer hours than

those of rival countries, the labourers are relatively low paid and large markets are close at hand.*

Australia.

Large exports of wool (chiefly from Melbourne and Sydney) are made to London, where it is sold by auction and distributed all over in Europe. Wheat, rice and oranges are other important Australian exports, again mostly to London. Imports are chiefly manufactured articles.

Czechoslovakia.

Czechoslovakia was an enterprising new Republic formed during the post-war reconstruction of Europe out of the Czech provinces of the late Austrian Empire (Bohemia, Moravia, Silesia), and Slovakia. In these areas industry was well developed, its growth having been greatly favoured by nature, and the necessary supply of coal, iron-ore, water power and intelligent labour was available. In the Czech provinces modern industry had gradually developed out of small workshops, with glassware as the chief industry. After the Great War this new state developed her industries enormously and extended her trade to all parts of the world. By the introduction of the Capital Levy,† Czechoslovakia placed her finances on a solid and firm footing, and it was until recently one of the important industrial and commercial nations of Europe but Germany has now broken up the growing solidarity of the new nation by annexing first the Sudetenland and then the Czech provinces of Bohemia and Moravia.

*The Kra Canal The Isthmus of Kra is Siamese territory which joins Siam with the Malay Peninsula. The Japanese Government are trying to induce the Siamese Government to cut a canal through the Isthmus or allow Japan to dig the canal at her cost. The scheme, if ever it sees the light of day, would shorten the distance between India and Japan by over 700 miles, the freight on Japanese goods to India and Indian goods to Japan might be reduced, but the importance of Singapore would greatly diminish and thus the British probably oppose the development of the project. If, however, the idea ever matures, the work will rank with the great canals of Suez and Panama.

† A tax levied directly on the amount of capital of an individual.

World Trade in 1938
(in 1,000,000 old U. S. A. gold dollars)

		<i>Imports</i>	<i>Exports</i>
	<i>World</i>	14,232	13,356
1.	Africa	911	888
2.	North America	1,563	2,382
3.	South America	709	852
4.	Asia	2,114	2,116
5.	Europe	7,962	6,101
6.	Australia	305	306
7.	Germany	1,296	1,250
8.	France	783	516
9.	Switzerland	215	178
10.	U. S. A.	1152	1,805
11.	Japan	444	447
12.	Czechoslovakia	172	210

Burma.

Burma is now a foreign country, having been separated from India in April, 1937. More than half of Burma is forest. The chief products and exports are rice, kerosine oil, petroleum, other mineral oils, teak wood, benzene, matches, lac and tin. She imports coal, gunny bags, cotton piece goods and twist, and iron materials from India. Machinery and better kinds of cloth, some kinds of iron goods are imported by her from foreign countries.

SUMMARY.

The best use of a country's natural resources can be made through commerce. All the countries of the world can increase their wealth by mutual co-operation.

Britain is very deficient in agricultural resources, but by the energy, activity and moral and mental strength of the people, the country became the leading industrial nation of the world. It has made good use of a central position, broken coast-line, the presence of coal and iron and a temperate and equable climate. The chief exports consist of textiles, iron and steel goods, metal wares and coal, while the imports are mainly food and raw materials. Britain has the largest entrepot trade in the world.

Germany is an example of a country which owes much of its industrial advancement to commercial and technical education and to the application of science to industry. The chief manufactures are dyes, sugar, silk, woollen goods, steel, hardware and iron.

France is noted chiefly for industries requiring great skill and good taste; there are many cottage industries in the country.

Switzerland has cattle-rearing as its main agricultural industry; in manufactures it excels in work which requires very great care and attention to detail; watches are one of the specialities of the country

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The U. S. A. has made good use of splendid natural resources, and is the largest producer of iron and steel, corn, cotton, wheat and tobacco. It surpasses most other countries in machine equipment and scientific management.

Japan has been called the Britain of the East. It has made remarkable progress in recent years, especially in cotton and rayon goods, paper mills, match factories and iron and steel manufactures.

Australia is a large exporter of wool; most of the export trade of the country is carried on through London.

Czechoslovakia is famous for glassware and has considerably developed industries and trade since the Great War.

Questions and Exercises

1. What is commerce and what does a country gain by it? Illustrate with reference to Great Britain, Japan, Germany and Australia.

2. Discuss the nature of India's trade relations with (a) Britain, (b) Japan, (c) Germany, (d) U. S. A., (e) France.

3. Compare and contrast Great Britain and Japan as industrial nations.

4. What are the chief causes of the industrial advancement of the following nations: Germany, U. S. A., Switzerland, England and Japan?

5. What is Entrepot Trade? What country has the largest entrepot trade and why?

6. Compare and contrast India's trade with that of England, Japan and U. S. A.

7. Give examples of countries where the people have not become lazy in spite of the existence of many natural advantages. What use have they made of the natural resources?

8. What is scientific management? Where is it mostly practised and with what results?

9. Which countries are Britain's greatest rivals in the Eastern trade? Compare the relative position of each.

10. Give examples to show that the German people know how to invent new wants for other people.

11. Give the principal imports and exports of the following countries:—

(a) U. S. A., (b) India, (c) France, (d) Japan, (e) Australia.

12. Why is France not a great competitor in world trade?

13. What are the chief items of India's imports from Japan?

(P. U. 1934)

CHAPTER XI

LABOUR—THE HUMAN FACTOR IN PRODUCTION

Man is the active, and thus the most important, agent of production. People who have obtained greater mastery over nature, and not only harnessed its forces to their use, but have overcome its obstacles, are the more rich and prosperous nations.

Labour is the economic work of man with the hand or head ; it is human effort directed to the production of wealth. Professor Marshall defines it as "any exertion of mind or body undertaken partly or wholly with a view to some good other than the pleasure derived directly from the work." Let us consider his definition. Only human exertion is Labour ; the work done by animals, such as donkeys, horses, camels, etc., is not classed as labour, in Economics, where it includes, not only manual labour performed by smiths, carpenters, farmers, and factory workers etc, but also mental work. such as is done by lawyers, teachers, clerks, statesmen, writers, managers, agents, and organizers. Labour may result in the creation of a commodity such as a shoe or needle, or it may involve simply the rendering of a service by one person to another in return for a reward (*e.g.*, the labour of a domestic servant) ; both of these are equally good productive labour.

All exertion of mind or body is not necessarily labour in the economic sense, as the science takes account only of such exertion as involves an element of irksomeness, unpleasantness or restraint, *i.e.*, when it is undertaken not for the pleasure of the work itself, but for gain. It is labour only if its motive is the creation of values. A

musician who sings for a reward is a labourer, but one who sings for pleasure is not. A man who climbs a mountain for pleasure, or one who plays tennis for exercise is not a labourer. They produce utility but their motive is not to produce wealth or value; but the guides who climb mountains for fees and professional tennis players are labourers. Exertion, the intention of which is to create value, is labour, even though it fails in its object or is misdirected. Thus, if the Mandi Hydro-Electric scheme had failed, the effort spent on it would have been unproductive labour.

A question of prime importance in connection with labour is, what are the conditions affecting the total amount, or supply of it in a nation, or what constitutes a country's labour force? The first thing to be considered is the number of people available, but it is not merely numbers that matter. A hundred workers in one country may furnish much more productive labour than a similar number of workers in another land. Most of us are familiar with the statement that the British workmen are among the best in the world, e.g., an English weaver can turn out a larger quantity and better quality of material than an Indian weaver working for the same time, under similar conditions and with the same materials. It is not because one works harder than the other, but because he or she is more efficient. The two main determining factors of a nation's labour force then are :—

- I. Quantity (numbers).
- II. Quality (efficiency).

The number of labourers depends on the density, distribution, and growth of population in a country. Efficiency depends upon the health and strength of the populations, the character, organization, acquired skill or technical training, education, social customs, habits and institutions of the people.

Size and Growth of Population.

The size of the population at any given time depends on (i) birth-rate, (ii) death rate, (iii) immigration and (iv) emigration.

The birth-rate gives the number of children born annually among a fixed number of people; it is usually expressed in terms of the number of births per annum per thousand of the population. The larger the birth-rate in a country, the more its population will tend to grow. The result is modified by the death rate and the number of emigrants and immigrants. The average birth and death rates per thousand living for the last decennial period for some important countries are given below :—

<i>Countries</i>	<i>Birth-rate</i>	<i>Death rate</i>	<i>Rate of natural increase</i>
India	34.4 26.4	24.9	9.5
Japan	32.3	18.2	14.1
Australia	19.8	8.5	11.3
New Zealand	18.8	8.6	10.2
Canada	24.5	11.0	13.5
U. S. A.	18.9	11.3	7.6
England	15.3	12.0	3.3

It will be noticed from the above figures that where the birth-rate is high the death rate also tends to be high. India has a high birth-rate with a high death rate, but this is no matter for congratulation as from the point of view of the effect on population, survivals only count and as the death rate is so high, the increase has been much smaller than that of countries like Japan, Canada or Australia. More people are brought into the world than can live well and in such a case a high birth-rate is not a blessing.

The density of population depends on :—

1. FERTILITY OF THE SOIL, CLIMATE AND RAINFALL.

The population of India, as in every agricultural country, is thickest where the soil is most fertile ; land fertility depends mostly on rainfall, and there is a close connection between this and density of population. It is not, however, the quantity of rain that matters so much as its certainty and regularity. A moderate rainfall may support a dense population if there is a good system of irrigation as it is a large production and healthy climate that matters. Thus the well watered areas of the Indo-Gangetic Plain and the coastal strips are the most thickly populated parts of India, while the dry areas of Baluchistan and the Rajputana Deserts are sparsely populated ; the Brahmaputra valley is thinly populated in spite of a heavy rainfall because it contains many mountains and jungles and its climate is unhealthy. The arid parts of the Punjab and the Deccan, though getting insufficient rain, are densely populated because of the irrigation carried out by the Government during the past eighty years.

2. SECURITY OF LIFE AND PROPERTY. Peace and settled government are essential conditions for the growth of population. British India is more thickly populated than the Indian states, the ratio of the average density of population being 248 to 114. The existence of peace and security in the country is tending towards a steady growth of population in India.

3. STANDARD OF COMFORT, OR THE PRODUCTION AND DISTRIBUTION OF WEALTH. These are shown in the growth of industries, development of the means of communication and opening and working of iron mines. Population has a tendency to move to places where there are opportunities of getting a better living, *e.g.*, there is a manifest tendency on the part of village labourers to migrate to the towns. Highly industrial and commercial countries with intensive

cultivation show the greatest density of population but a purely agricultural country will only support a very much smaller number of people. The fact that India is primarily an agricultural country explains to some extent the low average density of its population. The jute mills of Calcutta, the coal and iron mines of Bengal, and the cotton mills of Bombay attract large number of labourers from the agricultural areas of the country. The growth of Bombay, Karachi and Rangoon is due mostly to their participation in foreign trade ; while towns such as Delhi, Amritsar and Lahore are great commercial centres.*

Distribution of Population.

TOWN AND COUNTRY. The population of India is mainly rural as the people live mostly in the villages (89 per cent) which number 696,831, while 11 per cent. live in about 2,575 towns.† Agriculture supports 66 per cent. of the population ; 10, 6, and 2 per cent. are domestic servants and 3 per cent. are engaged in public administration ; the remainder follow odd occupations.

* The population per square mile of the various provinces in India is as follows :—

Ajmer-Merwara	...	207	Baluchistan	...	9
Andaman and Nicobar Islands.	...	9	Bengal	...	646
Assam	...	157	Bihar and Orissa	...	454
Burma	...	93	Bombay	...	177
C. P. and Berar	...	155	Madras	...	328
Coorg	...	103	N. W. F. P.	...	179
Delhi	...	1,110	Punjab	...	238
			United Provinces	...	456

* According to the Census Code, a *town* includes (1) every Municipality ; (2) all Civil Lines not included within Municipal limits ; (3) every Cantonment ; (4) every other continuous collection of houses inhabited by not less than 5000 persons, which the Provincial Superintendent may decide to treat as a town for census purposes ; and (5) the capital of every Indian state except the minor Simla Hill States.

A village means any area (a) for which a separate record of rights exists or (b) which has been separately assessed to land revenue, or would have been so assessed if the land revenue had not been released, compounded for, or redeemed, or (c) which the Local Government may by general rules or special order declare to be an estate.

Compare this with the position in some other countries. While India has 11 per cent. of its population in towns, England has 80 per cent., the U. S. A. 56 per cent., France 49 per cent., and Germany 46 per cent. There has been a very slow increase in the urban population of India between 1831 and 1931. In England the town population grew at an enormous rate during the Industrial Revolution. The extremely low proportion in India of urban population is one index of the economic backwardness of the people; it tends to show their lack of power, intelligence and self-dependence. Civilization and progress have mostly originated in towns from whence they have radiated into the country side. The present unsatisfactory state of affairs in this respect can only be radically altered by the development of industries, trade and transport.

Distribution according to Sex.

According to the census of 1931 there were 940 females to every 1,000 males among the people of India and in the towns the proportion of females to males is lower; this has an adverse effect on the health and morals of the people. "Various reasons have frequently been repeated to explain this shortage of females which is so characteristic of the population of India as compared with that of most European countries. The female infant is definitely better equipped by nature for survival than the male, but in India the advantage she has at birth is probably neutralized in infancy by comparative neglect and in adolescence by the strain of bearing children too early and too often. Sons are everywhere desired not only among Hindus, where a son is necessary to his father's salvation, but almost equally so among other communities as well; daughters in many parts of India mean great pecuniary expense in providing for their marriages, which moreover, among the majority, perhaps, of Hindus, must be arranged by the time they reach puberty. So strong indeed is the prejudice against the birth of daughters

that abortion is reported* to be sometimes practised if the child in the womb is foretold to be a girl.....Further, among Hindus and Jains the effect of the consequent limitation in the number of females as compared with males is accentuated by a ban on widow remarriage.* A severe critic of the 1911 census report writes that early marriage is a prime cause of the low ratio of females. The number of females per thousand males is much lower in urban areas than rural. There are 850 females to each 1000 males in the rural districts and 705 in the towns of the Punjab.

Of the major Indian provinces the Punjab† has the smallest proportion of females to males; the proportion increases to the east and south. This peculiar characteristic has given rise to a variety of opinions, and some foreign critics of the Indian census have ascribed it to incomplete returns. In European countries females outnumber males owing to emigration and to some extent to a decline in the male birth-rate. The poorer countries with a large natural increase generally have a smaller proportion of females to males ‡. The sex proportions in countries such as the United States of America and Australia are, of course, greatly affected by the large amount of male immigration.

Mobility of Labour.

In order that the available labour supply of a country may be properly utilized, it should possess considerable

* Census of India 1931, Volume I.

† FEMALES PER 1000 MALES

Indian Provinces		Other Countries	
Punjab	... 831	England and Wales	... 1,087
N. W. F. P.	... 843	France	... 1,083
United Provinces	... 902	Holland	... 1,012
Behar and Orissa	... 1,005	Germany	... 1,067
Bengal	... 924	Japan	... 990
Burma	... 958	Turkey	... 1,067
Madras	... 1,025	U. S. A.	... 976
Bombay	... 901	Australia	... 967
C. P. and Berar	... 998		
Assam	... 909		
Baluchistan	... 717		
Coorg	... 803		
Delhi	... 722		

‡ See publication 64 of the Punjab Board of Economic Inquiry

mobility, *i. e.*, the labourers should work when and where the inducements are the greatest, 'Man is of all the different kinds of luggage, the most difficult to transport,' said Adam Smith, and nowhere in the world does perfect mobility of labour exist; the hindrances to its movement differ from country to country and in India the people are of the stay-at-home kind. They have domestic, social and religious prejudices against venturing far from home; consequently permanent emigration is very rare. Nor is there much scope for it as Indians are not permitted (or only in small number) to remain in Australia, Canada, the U. S. A. and Africa; temporary migration is, however, more common. Such mobility of Indian labour as exists is of considerable importance to the agricultural population as it helps to relieve the increasing pressure on the land; but, as has been said, there are many obstacles against movement.

The phrase 'mobility of labour' also implies movement from one occupation to another and this too is considerably hampered in India by the caste system; occupations are frequently chosen according to the caste in which a child is born.*

Health and Strength of the Population.

Man's capacity for work depends upon health and strength and hence these are most important factors in determining a nation's labour supply. The causes which determine strength of body and vigour of mind are:—

I. CLIMATE AND PHYSICAL CONDITIONS. Temperate weather and cold winters are generally conducive to hard work; tropical heat makes sustained labour difficult.

II. QUALITY AND AMOUNT OF FOOD AND SHELTER. Good work cannot be expected of labourers who are ill-fed, insufficiently clothed and poorly sheltered. The Indian diet, compared with Western, has less protein; the

* Mobility of labour from place to place is called horizontal mobility while that from one occupation to another or from one grade to another is called vertical mobility.

American labourer is better fed and clothed than the workmen of most other countries; and this alone would be sufficient to account for his higher capacity and productivity. The standard of living of the Indian labourer is abnormally low; millions of people are underfed and under-clothed, with the result that they have not the vitality to resist disease and consequently much potential labour power is lost to the country.

III. THE LABOURER'S STATE OF MIND or what Marshall describes as "freedom, hopefulness and change." This depends on personal and religious influences and on general education; one who has a wider outlook on life is usually happier than one who knows nothing of the world other than his own village. The former is less conservative and more progressive; changes of work, of scene and of personal associations, develop initiative and creative energy. Those villagers of India who went abroad during the Great War brought a new spirit with them on their return. The general ignorance, restricted outlook, reliance on fate, and superstition of the people of India are almost proverbial; masses of labourers are unskilled and mostly agriculturists and hence they are not desirous of making changes.

The health and strength of the people of India compares very unfavourably with that of the people of most of the other countries. There are many virulent epidemics such as plague, cholera, and influenza in the country and the general health is considerably lowered by the prevalence of epidemic diseases such as malaria, hook-worm, tuberculosis, kala-azar, etc. The average expectation of life in India of a male is 26.91 years as compared with 55.62 in England, or less than half. In the case of females, the figures are 26.55 for India and 59.58 for England, again less than half.

This death rate, especially among infants and women, is due to the following causes :—

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1. Poverty, and consequently a low standard of living.
2. Lack of sanitation, primitive obstetrics and insufficient medical relief.
3. General ignorance of the people.
4. Early marriages, and hence immature maternity.
5. *Purdah* system.
6. Religious superstitions and practices.

The infant mortality rate has long been notoriously high in India as compared with most countries of western Europe. The following table shows the infant mortality rate per 1,000 live births from 1911 to 1931 :—

YEAR		YEAR		YEAR		YEAR	
1911	205	1916	202	1921	198	1926	189
1912	208	1917	205	1922	175	1927	167
1913	195	1918	267	1923	176	1928	173
1914	212	1919	224	1924	189	1929	178
1915	202	1920	195	1925	174	1930	181
						1931	179

A poor standard of general health is one of the chief causes of the low output per head and of the economic inefficiency of the country.

Quality and Quantity of Population.

The quantity and quality of population of a country are closely connected. We have seen that a high birth-rate is almost invariably accompanied by a high death rate, low standard of living, poverty and short lives. An ill-fed and unhealthy people are bound to have a low efficiency. We have also seen that there is greater tendency to growth of numbers amongst the lower strata of the population ; a less efficient people are bound to be poor and therefore more prolific. On the one hand, their growth reduces their standard of life and efficiency, and on the other, reduced efficiency, and a lower standard of life leads to further growth in their numbers ; this is precisely the

condition in India to-day. The bulk of Indian labourers are unskilled agricultural workers dependent on land; the birth-rate among them is very high, which leads to a further fall in the standard of living and increased pressure of the population on land. Unless the quality of the population is improved, and the produce from natural resources increased, the bulk of the people of India will not be able to get out of this vicious circle.

INDUSTRIAL SKILL

The next important factor in the efficiency of the labourer is his skill. So far as bodily labour is concerned this depends on the harmony, agility, quickness and exactness of muscular movements which may be acquired by hereditary influences, training and practice. Any game, or other movement of the limbs, which appears difficult at first, becomes gradually easier with practice. A beginner in tennis knows how difficult it is to serve the ball into the proper court; at first he has to be very careful to get the proper force and direction for the stroke; but this becomes easier with practice and eventually it may become an almost automatic movement of the limbs; with still greater care and attention a very efficient service may be developed; similarly satisfactory movements of a labourer at work may be acquired by practice. A carpenter sawing a piece of wood seems to proceed almost unconsciously with facility and ease, but one unaccustomed to the use of a saw finds it a difficult task to use it properly; an intelligent man may be able to acquire facility in its use more quickly, than a dull, foolish man who finds it difficult to learn to use the saw efficiently. Skill, therefore, depends not only on special training and practice, but also on general knowledge and intelligence. It is the same with mental activity; e. g., a mathematician can easily solve problems which an untrained mind cannot

comprehend. Scientific progress is the result of hard deep study, thinking, constant application and practice.

Caste System in India.

The chief value of the caste system, from the point of view of wealth production, is that it gives practice to each succeeding generation of workers who have probably also some inherited skill and aptitude for a particular job. The goldsmith's son may not only inherit a little of his father's skill but, seeing him at work from childhood he may have an ambition to do the same and gradually pick up the work under his father's guidance. He need not work as an apprentice outside, or learn the art in a school or college; he may become a goldsmith even when quite a young boy. The skill of the old Indian weavers was unsurpassed and was mostly due to the caste system, the chief economic defect of which is that a man can learn only the trade in which he is born, and can know only those methods in that trade which his father knew; he cannot learn more than his father except by accident. A goldsmith's son who has seen his father, with simple implements, make a few crude, silver ornaments used by village folk cannot learn to prepare exquisite jewellery, nor does he know modern methods. Further if a goldsmith has four sons, all of them will have to take their ancestral occupation irrespective of the demand for goldsmiths in the village; there will be less work for each of them and the community will not be able to make full use of their skill and services. The caste system is therefore only suited to a static society and is devoid of the elements of growth and progress. Skill is secured in the progressive communities by :

- (i) More minute, unrestricted division of labour.
- (ii) Adequate provision for general, technical and commercial education.

DIVISION OF LABOUR

The efficiency of productive effort in a community depends very largely on the extent to which division of

labour is carried. If we compare the results of industrial activity to-day with those which were obtained, (say in England), even half a century ago, we notice an enormous advance in the methods of production. This is mainly due to the fact that "work has become more specialized, that each one devotes his energies to some one particular kind of work and that even the simplest article of daily use is the result of the joint effort of many workers."

By Division of Labour we mean the arrangement of work whereby each one confines himself to the production of some one thing, or those few things, for the production of which he is best fitted and then exchanges his surplus product with that of others who are specializing on the other work; this is called simple, or horizontal division of labour. The process of dividing the work involved in the making of a given article (each man performing some single operation), and then assembling all the parts to produce a complete whole is known as complex or vertical division of labour.

Adam Smith was so deeply impressed with the importance of division of labour that he began his "Inquiry into the Nature and Causes of the Wealth of Nations" with a discussion of this principle. He very vividly described the effect of this on production and its advantages; his illustration of the pinmaker has become classical and may be quoted *in extenso*.

"To take an example, therefore, from a very trifling manufacture, but one in which the division of labour has been very often taken notice of, the trade of a pin-maker. A workman not educated for this business (which the division of labour has rendered a distinct trade) nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could, and scarce perhaps with his utmost industry, make one pin in a day and certainly

could not make twenty. But in the way in which the business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches of which the greater part are likewise particular trades. One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head, to make the head requires two or three distinct operations, to put it on is a peculiar business, to whiten the pins is another; it is even a thing by itself to put them into the paper, and the important business of making a pin is in this manner divided into about eighteen distinct operations, which in some manufactures are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufacturing concern of this kind where ten men only were employed and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about 12 lbs. of pins in a day. There are in a lb. upwards of 4000 pins of a middling size. These ten persons, therefore, could make among them upwards of 48,000 in a day. Each person therefore making a $\frac{1}{16}$ th part of 48,000 pins might be considered as making 4,800 pins in a day. But if they had all wrought separately and independently and without any of them having been educated to this peculiar business they certainly could not each of them have made twenty, perhaps not one pin a day, that is certainly not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing in consequence of a proper division and combination of their different operations."

In Adam Smith's time the use of machinery was still in its infancy, but since then its extended use has made this sub-division of processes infinitely more minute. In a modern pin factory there are many more processes than

those mentioned by Adam Smith and the average output per man, instead of being 4,800 is estimated to be not far short of 15,000,000 pins.

The way in which division of labour contributes to productive efficiency are :—

1. The skill and dexterity of the labourer is considerably increased by confining himself to one definite task.

2. Labour, time and tools are saved, as there is no passing from one process to another.

3. As processes become more and more subdivided, they become simpler until some of them are reduced to such a simple routine of uniform movements that it is possible for them to be done by a machine. The extended use of machinery is in this way closely connected with the division of labour.

4. The use of machinery enables huge tasks to be performed which could not be done by hand. Manual effort and strain are diminished by the use of machinery.

5. The simpler the process, the easier it is to classify workers and to assign to each the task for which he or she is best fitted. Young people of both sexes find employment better suited to their varying degrees of strength and ability. There is a great extension and diversity of occupations. Time and effort are saved in learning a trade.

6. The more the processes are divided the more closely do certain types of work resemble one another. This makes it easier for workers to change from one trade to another of a similar character.

7. Inventions are encouraged by devoted attention to the work and the regular watching of a particular process of a machine.

8. Hours of labour are shortened and the worker may be afforded greater leisure for recreation ; or alternatively there is an increase in the standard of living ; or both.

9. Factory life brings the labourer into closer contact and association with his fellow workers and thus there is more social intercourse and better opportunities for self-expression and development.

In India there is general tendency to exaggerate the disadvantages of division of labour which are :—

1. The worker tends to lose his skill and sense of responsibility. The skilled artisan becomes simply a machine-tender and has no direct personal pride in the product.

2. Work is often monotonous and dull.

3. The mind of the worker tends to become narrower owing to the restricted character of his work and he loses interest in his job.

4. The introduction of the factory system leads to the crowding of people into cities ; work is sometimes done under unhealthy conditions.

5. Conflict between the employers and the employed is increased.

6. Over-specialization leads to loss of mobility of labour and greater chance of unemployment.

But these defects are remediable. The experience of industrial countries has shown that to-day manual work is not so heavy, but it requires greater exercise of individual judgment and intelligence. The factory worker has wider interests than the agricultural labourer and more capacity for utilizing his leisure hours. The standard of living of the people has been raised considerably and the laboriousness of work has been diminished. The opportunities of living a richer and more varied existence are greater to-day than ever before in the history of the world.

Territorial Division of Labour.

Division of labour according to territory may also be seen where different industries are located in particular places; this is called localization of industry, or geographical division of labour. Examples of this in India are to be seen in (a) the cotton industry localized mostly in Bombay, (b) jute in Bengal, and (c) the woollen industry in Northern India. In England these industries are mostly carried on in Lancashire, Dundee and the West Riding of Yorkshire respectively. Similarly, England produces coal and cotton goods, France silks, India jute and raw materials, Australia wool, and America raw cotton, iron and steel goods.

The chief causes leading to the localization of industry are :—

(i) *Proximity to raw materials*, examples of which in India are : gold-mining in Mysore, cotton manufactures near the black cotton soil in Bombay, jute and silk in Bengal, wool in the Punjab and Kashmir.

(ii) *Accessibility to markets*. Industries which produce articles of luxury are generally localized in capital cities, where the patronage of royalty and the court, and the presence of wealthy people, ensures a considerable demand for such goods. Delhi, for example, has been an imperial town for centuries and it has specialized in ivory carving and gold and silver work. Articles for religious worship are made in Benares, the sacred city of the Hindus.

(iii) *Presence of water power*, e. g., the Tata Hydro-Electric Works ; the Mandi Scheme.

(iv) *Favourable climate*, e. g., jute in Bengal and cotton in Bombay.

(v) *Availability of labour* e. g., the sports industry in Sialkot, which has grown partly because of the abundant supply of trained workers.

(vi) *Availability of Capital.* The fact that there is a difficulty in securing a good supply of Indian capital impedes the industrial development of the country very considerably.

(vii) *Momentum of an early start.* The growth of the sports industry in Sialkot again affords a good illustration ; the industry was started early and this helped it to expand consequently, other places find it more difficult to compete with Sialkot manufacturers.

Industries tend to grow most easily in places which are suited to their growth, i. e., in places where economies can be effected, but this kind of development is hindered by protective tariffs. Each place and each country is able to contribute its best to the wealth of the world, when the industries are allowed to go on freely, just as each man is of most use when he is able to make the best use of his natural and trained ability. Specialization is the basis of economic progress. " Each to his utmost " is a good motto in Economics ; if each one does the work for which he or she is best fitted, then the world is most enriched by such effort ; this applies to countries as well as to individuals, since nations are simply aggregations of individuals.

Division of Labour and Markets.

Division of Labour necessarily implies exchange ; each worker does not produce everything he wants, but works at a job in which he has the greatest relative advantage in production and then exchanges his products or service, with the products or services of others. Each one works in the hope that the produce of his labour will sell, i. e., he produces for a market. If goods have to be produced not for the immediate satisfaction of one's own wants but to satisfy others, then one has to produce those goods for which there is a demand. A village shoe-maker, who confines himself to the making of shoes, does not produce them for his own use alone but for his customers. The villager, who wants a pair of shoes, places an order for shoes to fit his own feet. The shoe-maker makes as

many pairs as he can sell at a profit. If he makes more than can be sold in the village he suffers a loss, unless he can find an outside market. It would be impossible for him to confine himself to the production of shoes alone, if the demand for them were not sufficient to provide him with a living.

Suppose, however, an efficient shoe-maker makes such a nice standard pattern of shoes that fit all feet, that the village folk like them very much and everyone wants to buy his pattern because it is good and cheap. Then the demand for his shoes will increase and the maker may not be able to satisfy the whole demand by his own labour alone; he will now find it profitable to employ another shoe-maker to assist him in the work. He himself may keep to the work of preparing the uppers of the shoes only and get his assistant to prepare only the soles. In this way the output of shoes may be considerably increased and the economies effected will not only produce more shoes, but at a cheaper rate than before.

Suppose the shoe-maker can afford to sell

- (a) 100 pairs at Rs. 3-0-0 per pair, or
- (b) 200 „ „ Rs. 2-8-0 „ „ or
- (c) 400 „ „ Rs. 2-0-0 „ „

His scale of production will then depend upon his being able to sell the given number of pairs at the stated price. Suppose he could sell 80 pairs at Rs. 3; 200 at Rs. 2-8-0; 300 at Rs. 2. At Rs. 2 per pair he could sell 300 shoes, while it pays him to produce as many as 400 at that price; he will not increase his production to 400 pairs, because he cannot sell that amount at a profit. So the extent of his production is limited by the demand, *i.e.*, the scale of production is limited by the extent of the market. The number of workers to be hired by a producer depends, in turn, on the quality and quantity of goods to be produced. The extent to which division of labour can be carried is thus limited by the extent of the market.

Market.

One dictionary meaning of the word market is "A gathering of people for the buying and selling of provisions and livestock ; an open space or closed-in-building, where goods are exposed for sale." All Indian students are familiar with general *mandis* which are held from time to time in the villages, and also with the grain *mandis* in the towns. These are not what are called 'markets' in Economics, where the term is not limited to any specified locality ; nor does it mean any particular place, or places, where all kinds of goods, or several commodities are sold. The word market is used by the economists to indicate a number of buyers desirous of obtaining a certain article for money and number of sellers seeking money for that particular article. The buyers must be able to purchase the goods from the seller who is prepared to charge the lowest price and the seller must be free to sell to those who offered most money. The buyers are assumed to know the rates at which all the sellers are prepared to sell, and hence one will pay more for the commodity than any other buyer is required to pay. So long as the buyer gets what he wants, he is indifferent as to where it is purchased. If the price asked by one seller is lower than that asked by others, then all buyers will have a tendency to purchase from that lowest price seller. Similarly no seller will dispose of an article at a lower price than that obtained by any other seller for the same article. If one can afford to charge a higher price, then all the others will ask the same price. When there is such competition between the buyers and sellers of a commodity so that there can be only one price for it at any given time, then there is said to be a "market" for that commodity. A 'market' then is not a place, but a commodity having buyers and sellers competing with one another. The Moga (Punjab) *Mandi* and Cattle Fair are not markets in the same sense of the term as it is used in Economics. If a farmer has cotton available, he may sell it to the *bania* of his village, or may take it to a neighbouring town, or he may sell it to some

agent of a European or Japanese firm who visits his place. If the *bania* and the agent and the town shopkeeper are competing for the cotton, and the price of the cotton is determined by taking into consideration the demand of all these people, then there is said to be a wide market for cotton. If on the other hand, the farmer knows nothing of the world's demand for cotton, has never gone out of his village, nor has any foreigner, or more adventurous Indian trader, come to him, and he can dispose of his cotton only to the *bania* at whatever price is offered to him, then the market for his cotton is said to be extremely narrow. A market is not limited by place, or by boundaries, but by the number of buyers and sellers and the extent of the competition between them. The market for any commodity may not only be local, or even national, but world-wide, and its size depends upon :—

1. THE EXTENT OF THE DEMAND AND SUPPLY OF THE COMMODITY. If an article is in universal demand, there will be a tendency for its market to be world-wide. Indian cotton and jute are demanded all over the world and there is a world market for them. Gold and silver, stocks and shares of well-known companies, are demanded everywhere; there are world markets for them. On the other hand a village tailor's work can hardly be in universal demand; his market must necessarily be limited to the small number of his customers; a local blacksmith's market is limited to his village; the market for *dhoties* cannot be a world affair as the demand for them is confined to India and thus it can only be a national market. There can only be a restricted market for curios, works of art, and antiques, as the effective demand for them is confined to a relatively small number of people.

2. DURABILITY OF THE COMMODITY. Fresh vegetables, fruit, milk and fish have generally local markets, as they cannot usually be preserved for any length of time, although, with the development of the refrigerator, their preservation is now possible and hence the market for

them has been widened very considerably in recent years. Gold and silver have wide markets as they are almost non-perishable.

3. **PORTABILITY OF THE COMMODITY.** Articles such as bricks have a very restricted market as the cost of their transport from place to place is relatively high compared with their value; stocks and shares have a wide market because the cost of their transport is practically negligible.

4. **SUITABILITY OF THE COMMODITY FOR GRADING, SAMPLING AND EXACT DESCRIPTION.** When a commodity can be sold in large quantities by letter or cable all over the world, without possible misunderstanding, or doubt as to the exact requirements then it will have a world-wide market. Cotton and wheat are good examples of this as they can be sold by name, or number, of the quality, or by sample; on the other hand cattle cannot be sold in this fashion.

5. **PEACE AND SECURITY OF PROPERTY.** For the extension of market for commodities, and for the existence of a wide market, it is also necessary that there should be peace and security in a country, a good and stable monetary system, and highly developed means of communication and transport. In days when there was little internal peace and security, when there was a danger of robbers and bandits, when there was no uniform monetary system, and goods were carried by pack animals or carts then markets for commodities were very limited in area. Wheat and food grains, when grown in excess in one district, could not be transported to an area of scarcity and famines were frequent. The wheat grower in India had to sell his product to the village *bania*, mostly in discharge of the debt owed by him to his money-lender. Now as a result of the building of the railways the Punjab agriculturist, for example, can sell his wheat outside the province and even to the people of Europe. The price of Indian wheat is a world price and every producer can take advantage of the world price and put his little stock on the market.

In places where fruits can grow in abundance, much fruit used to be wasted because it could not find a market. Now, owing to the introduction of railways, the provision of cold storage facilities, and good packing, the surplus stock of any place can be sold at a profit over a much wider area, e.g., Kulu pears, Saharanpur mangoes and Baluchistan grapes, can be obtained in any part of India. Bombay mangoes are sold even in London. By this means not only do the producers of a commodity get a better price, but the consumers who attach great importance to an article can obtain it. This commodity has then its maximum utility, and the general wealth of the country is thus increased.

Marketing in India.

The marketing of goods in India frequently suffers from inadequate means of communication, an ever-increasing chain of parasite middlemen, and an age-long illiteracy. At the Provincial Economic Conference in 1934 it was generally agreed that it was desirable to improve the marketing facilities for agricultural products. The recommendations made broadly follow the recommendations of the Royal Commission on Agriculture, which were also generally endorsed by the Banking Enquiry Committee. Accordingly, a Marketing Department has been set up under the Imperial Council of Agricultural Research. This consists of a Marketing Expert, five Senior Officers, two other officers, and ten assistants. Similarly a Marketing staff has been appointed in each Province in order to obtain tangible results at an early date and to ensure a uniform rate of progress throughout India as a whole. A part of the cost of the Provincial Marketing staffs was to be met from central funds for a period of five years. In the Punjab a Marketing Officer and three Assistants are employed under the Director of Agriculture.

The Department has to deal with the main marketing problems, including propaganda and supply of information

from foreign markets, grading, sorting and bulking of the main staple products of the country, special marketing organizations for perishable commodities, collection of information about customer's requirements both in India and abroad ; planning of production on the basis of quality and demand, establishment and development of regulated markets, undertaking of market surveys for purpose of developing a common plan throughout India and the establishment of properly organized "future" markets, commodity exchanges and warehouses. *

In order to collect the information required for the market surveys the work of the staff involves :

1. Visits to the villages and markets in the main centres of production ; interviews with producers, merchants, manufacturers, transport and market representatives and others regarding their practice and methods of business in marketing different commodities.

2. Examination and differentiation of the various qualities of each product, by collecting samples, describing and photographing various processes and methods of marketing, grading, packing, etc.

3. Accounting, within a reasonable degree of accuracy, for the supply of each product produced in the province, by indicating its subsequent destination, methods of utilization, and describing the routes and channels of trade followed by such produce.

4. Collecting from producers, market authorities, trade and official sources information regarding producers', wholesalers' and consumers' prices, weekly, monthly and annually ; collecting information regarding the amount and causes of price margins, differences, fluctuations and variations.

Surveys were in the first instance initiated in regard to rice, wheat, linseed, groundnuts, tobacco, fruits, milk, eggs, live stock, and hides and skins and also in respect of

markets and fairs and co-operative marketing. The reports recently issued by the Marketing Advisor give an exhaustive picture of the marketing of agricultural products in India. Arrangements were made for the analysis of samples of new commodities at various centres, experimental grading and packing stations were established for hides at Agra and Delhi, fruits at Nagpur and Nasik, eggs at Pabbi in N.-W. F. P. and Kottarakara in Travancore and for *ata* from washed and conditioned wheat ground at Delhi. The Agricultural Produce (Grading and Marketing) Act was passed in March 1937 for protecting grade designations from being copied or otherwise misused.

MANDIS.

How Markets arose and developed.

In early times when each family was self-sufficing there was no necessity of exchanging commodities produced by one family with those produced by others. But with the development of the caste and guild-systems and the separation of employments and the specialisation of crafts need was felt for some organization whereby products could be exchanged and sold for the goods of other producers. This organization was found in the market place, mandis or bazars. The evolution of markets has been both geographical and functional. Geographically the family market has developed into the local market in a town or a village. At one time every family had its own cow and buffalo and obtained milk for consumption by its members. When separate profession of *gujjars* or dairy keepers developed, the markets for fresh milk became localised. With the development of transport facilities and means of preservation of milk there is a tendency for even market for milk growing into a national or even world market. Functionally we notice even in the local or mixed markets a tendency towards specialization. The local horse fairs

and cattle mandis are entirely distinct and are frequently held on various occasions. As trade and industry develop and commerce extends need is felt for increasing specialization, and separate mandis for important products are set up. The market in raw cotton is for instance a vast organization in itself.

Advantages of Mandis.

An important function of the mandis is that they facilitate the sale and purchase of goods at their proper values. A buyer who goes to the mandi has got a wide choice, he can get the benefit of expert advice from brokers and well informed dealers and the competition between the sellers and buyers is always tending to bring the price to a proper level. Mandis also provide an incentive to the producers to produce the best stuff, to compare it with that of other producers and to be able to compete with them on the best of terms so as to be able to get the best price for their goods.

Speculation.

In the modern world goods are produced long in advance of demand. The quantity and quality of crops of cotton, wool, and wheat is uncertain. The demand for these commodities is world-wide and is fairly regular. Due to uncertainty of supply there may be great fluctuations in the prices of these commodities. In the mandi in which these commodities are brought for sale merchants and dealers are always trying to make a living by forecasting price movements and market demand and by buying and selling for profit. They do not actually touch the raw material, but act as intermediaries between producers on the one hand and manufacturers on the other. They study carefully all the conditions affecting the demand for the commodity in which they are interested. They arrange for expert technical and general information concerning crops in other countries and gauge the future course of prices.

If they expect a fall in the price of the commodity in which they deal they proceed to sell out as much of it as they can. If they expect a rise in its price they buy in order to sell it in future. This is what is known as speculation.

By storing the produce in years of plenty for selling it when it is scarce, the speculator helps to steady the course of prices, and thus renders great service to the community. This is so when the judgment of the speculator is correct and his anticipation of the future course of prices proves to be true.

But, not unoften people with no knowledge or experience buy or sell on the off chance of making profit on the rise or fall of the market. This blind speculation is pure gambling and does a great harm to the country.

Tezi Mandi Transactions.

Speculation is centered chiefly on the stock markets and in the produce-exchanges in this and other countries. Separate mandis or produce-exchanges exist in respect of each important raw material, *e.g.*, cotton, wheat, gold, silver etc. etc. A common class of transactions taking place in mandis in this country are known as *tezi mandi*. In case of *tezi* the dealer, say A, is to secure an option to buy a certain quantity of goods, say 100 bales of cotton at Rs. 500 per bale. He has to pay a premium, of say Rs. 5 on each bale to the merchant B from whom he takes the option. The option is to purchase and take delivery of the 500 bales at a fixed future date, if it suits A. If suppose on the due date the price rises to Rs. 525 per bale, A would exercise his option to purchase at Rs. 500 and make a profit of Rs. 25 per bale less his premium of Rs 5 per bale, that is, a net profit of Rs. 20 per bale. If the price falls to, say Rs. 480, on the date fixed for delivery, A will abandon his option and would lose the premium of Rs. 5 per bale

paid by him. In the same way in the case of mandi a merchant who thinks that the price is going to fall secures an option to sell a certain number of bales, say at Rs. 500 per bale for future delivery, and pays a similar premium. Now supposing the price falls to Rs. 450 per bale, the merchant who had secured the option would purchase at Rs. 450 per bale to sell it at Rs. 500 and would make a profit of Rs. 45 per bale. Very often merchants secure double options *e. g.*, an option to buy as well as an option to sell. These are known as *tezi mandi* transactions.

Mandis in the Punjab.

Before the opening of the canals famines were quite frequent and people hardly grew the crops to satisfy their own demands. The construction of canals has marked a new era and have brought a complete transformation. The waste land is ploughed and people grow food and commercial crops in abundance which are brought into the markets for disposal. In the canal colonies a fairly large number of markets have been established. A market generally serves approximately 12 to 18 sq. miles. In the Punjab there are about 200 mandis.

The roads generally are unmetalled and during monsoon months they are in miserable condition, and the heavy bullock-carts and camels, which are the chief agencies of transport, are used with difficulty. The agriculturists suffer very greatly from this handicap.

Donkey, camel, and bullock-cart are the chief agencies of transport for grain, but only camel and cart are possible for cotton owing to its bulk, even the camel is not popular. Cotton brought in carts arrives in better condition and fetches higher prices. On a camel it has to be bagged and is liable to be roughly handled.

The shopkeepers in the markets are known as commission agents. They are of two kinds. One is a *kacha*

artia, who has generally limited means and who merely acts as an agent on behalf of the seller and for his services he gets some commission on the sale proceeds. The other is a *pacca artia*. He works as an agent of the seller and also buys himself. Every agent generally buys at one time to sell at an other. These are more or less gamblers. They have not wide knowledge of the factors which affect the oscillation in prices. They store the commodities and wait for sunny days. Besides these agents there is a number of people living in the villages near the market who buy at one time and sell at an other in hope of making profit. All these people merely depend on chance and it is generally seen that a very few gain in this bargain in the long run, and some of them become bankrupt. In some of the markets there are exchanges also more for these gamblers than for genuine business people.

The cultivator himself seldom brings his produce into the market. He prefers to sell to the village *bania* owing to the lack of adequate information, suspicion regarding rates owing to settling of rates secretly and deductions without his consent. Normally the produce passes through three intermediaries. The petty shopkeeper brings it from the producer and sells the same to the mandi merchant, a port-buyer or a mill through his commission agent. Cotton has to pass through the hands of cotton ginning factory owners in addition to the foresaid middlemen.

The seller brings his produce to the market, and if it is grain, unloads it on the platform before his agent's shops, and if it is cotton, leaves it standing in the cart, which has brought it in. Labourers in the mandis, known as "palladars" unload the grain and are paid at the rate of about $\frac{1}{2}$ pice per bag. If the produce is not to be sold readily the bags are stored. The "palladar" is paid one pice for carrying the bag upto store-room and equal amount when it is deposited in a heap on the platform at a later stage.

While the grain is unloaded on the platform in a heap, the inferior quality is scattered underneath and is covered over with the superior quality to deceive the buyer and to get higher price for the inferior quality. The buyers are also very clever. They understand these tricks and take samples from different corners of the heap as well as from underneath.

Daily once, usually in the afternoon, the brokers go round the market and passing from shop to shop strike bargains with the commission agent. The actual buyer and seller rarely take part in the bargain. The commission agent and broker represent the seller and buyer, respectively. After carefully examining the produce the brokers indicate their bids by taking the agent's hand under a towel and by making hidden signs with their fingers. The bid of one broker differs from the other only to the extent of a few pies or in fact damris ($\frac{1}{4}$ th of a pice). After inducing the highest and a few others the agent declares the highest bid and the bargain is settled. The agent is not under compulsion to accept the highest bid of a broker offered, but generally the highest bid offered is accepted. The system of secret bidding is disliked by the educated class as by open competition the produce can be sold at a higher rate.

After the bargain is struck the agent is not responsible if the produce is spoiled by rain or some other cause. Three "palladars" of buyer's shop come to the seller's shop with a bundle of empty sacks, a big needle and thread. Two palladars from the seller's shop unite with them and weigh the whole heap of grain.

In case of cotton after the settlement of bargain in or outside the factory gates the cotton is taken inside the factory for weighment. If the cotton below proves to be of different quality from that on the top a deduction called "watta" is made to cover the difference; when the

cotton has been damped or adulterated with earth or sand or leaves or country Cotton has been too frequently mixed up with the American cotton, it is a perfectly legitimate charge and discourages people from their malpractices. Frequently the *watta* is charged even when the cotton below is as good as displaced on the top. All the seller can do is to reload the cart and return to his village. This is very troublesome, sales are effected usually in the afternoon, it becomes too late to take back the cart with weary bullocks on the *kacha* road back to the village. Caught between the devil and deep sea, he is virtually forced to concede the claim.

The charges that have to be paid by the seller vary from market to market, and even shop to shop in one market. The customary charges for grain in one of the colony markets of the Punjab are given below :

Deductions made out of sale proceeds of Rs. 100.

	Rs. as. p.
Commission	0 8 0
Weighment	0 10 0
Charity	0 1 3
Gaushala	0 0 3
Unloading charges	0 2 0
Palladars of buyer	0 4 0
Miscellaneous charges in kind for the cook palladar etc.	0 9 6
Total	<hr/> 2 3 0 <hr/>

Though weighment charges deducted from the seller are 10 annas per cent., yet the weighman is given at the rate of nearly 4 annas and the remaining amount goes to the commission agent. Charity charges also remain with the agent. Thus the agent makes about 15 annas per cent. The miscellaneous charges vary at each shop, ordinarily 2 *chhataks* per bag are given to the sweeper, 4 *chhataks*

to palladar of seller and $1\frac{1}{2}$ to palladar of buyer and 2 chhataks to the cook. All these people perform some customary services to the commission agent and his customers. The charges of co-operative shops opened by the Government in the mandis are less than the commission agents'.

The only charge which falls on the buyer is one called "dami." It is intended to compensate the commission agent for the loss of interest on his money during a few days of grace, which vary in case of various commodities and the risk he undertakes. The seller is paid at once. The rate of *dami* also differs in various mandis of the Punjab. It is 8as. 6p. per cent., for cotton, 8 annas for wool and nearly 4 annas for wheat, gram, toria, ghee and sugar.

As it may be seen from the description of mandis the agriculturist does not get a fair price for his produce. The Royal Commission on Agriculture in India recommended the establishment of regulated markets to overcome these difficulties. Inquiries conducted under the guidance of the Marketing Adviser to the Government of India have brought to light some startling facts, for instance, out of a rupee which the consumer pays for his wheat or rice the producer gets only $9\frac{1}{2}$ annas, similarly the grower of linseed gets about 60 per cent., the grower of tobacco about 44 per cent., and the producer of ghee only about 60 per cent., of the final price. A seller has to pay many charges, such as *ahrat*, *dallali*, *dharmao*, *gaushala*, *pathshala*, *tulai*, *rolai*, *charhai*, *otai*, *munimi*, and *pallaaari*. In addition to these charges he has to pay in kind to sweeper, chowkidar, *bahishti* and cook of the commission agent. Excess weight deliverable by the seller is also in vogue in most markets, a maund being conventionally taken to mean say 41 sears.

The weights in different markets differ; they are often inaccurate and some shopkeepers are reported to keep two sets of scales and weights, one for buying and the other for selling. All or most of these abuses prevail practically in all the mandis. These evils have a disastrous effect on the economic condition of the producer and with a view to mitigate these evils, the Marketing Act has been passed in the Punjab. Legislation of analagous character already exists in Bombay, Central Provinces, Madras and Hyderabad.

The Punjab Agricultural Produce Markets Act.

This Act was passed by the Punjab Government in 1939 to enable the Government to exercise control over the purchase and sale of agricultural produce in certain areas. Within such notified market areas, no person can (unless exempted by rules) set up any place for the purchase and sale of agricultural produce or purchase and sell, the same except under a licence. The Government shall set up market committees for such areas to provide markets therein, to provide facilities for persons visiting it in connection with the purchase, sale, storage, weighment, passing and grading of agricultural produce and to issue licenses to brokers, weighmen, measurers, surveyors, warehousemen, etc.

SUMMARY

Labour is the active agent of production. It is the human exertion of mind or body, which is undergone with the object of the creation of values. If it adds to the sum total of existing utilities in the world, it is called Productive Labour.

Its supply depends upon the number and efficiency of workers.

The number of workers in a country depends upon (i) birth rate, (ii) death rate, (iii) emigration and (iv) immigration. Population has a natural tendency to grow even faster than the food supply of a country. A large birth rate is not necessarily desirable, however, because it is generally accompanied, (as is the case in India,) by a large death rate, a low standard of living, inefficiency and short lives. Population tends to grow usually in places where there are opportunities for earning, but in India, although it is mainly an agricultural country the pressure of population on land has

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increased very much. People are conservative and stay-at-home and opportunities for emigration are limited. Labour generally is immobile and the result is a reduction in the standard of living. Not only is there little movement of population from place to place but changes from one occupation to another are restricted by the Caste System.

Efficiency of Labour depends on:

(1) The health and strength of the people, which in turn depend on (a) climate, (b) quantity and quality of food supply, (c) mental conditions of the workers. The health and strength of the Indian workers are poor as compared with those of other civilized countries.

(2) Industrial skill, which depends on practice, training, education and discipline. "Practice makes perfect." On this principle is based the Division of Labour with its enormously increased productive capacity. The Indian caste system is based on the same principle, but it is not suited to progressive and advancing countries. Division of labour may be simple, or complex, or territorial. It grows with the development of exchange and markets. The wider the sphere of human co-operation, the greater the scope for division of labour and the higher the efficiency of each industrial worker.

"Market" in economics does not imply any particular place where commodities are bought and sold, but the whole of that region where the buyers and sellers of a commodity are in competition with one another. It is through the agency of market that free play is given to the efforts and activities of the producers on the one hand, and to the desires of the consumers on the other. It is through these that production adapts itself to the changes in demand.

Questions and Exercises

1. What is labour? Do the following come within your definition?—
(a) A quack doctor's work, (b) gambling, (c) keeping a gambling establishment, (d) playing on a flute, (e) making a flute, (f) making a machine which on completion does not work, (g) hill climbing by a tourist, (h) hill-climbing by a guide, (i) manufacture of opium, (j) the work of a thief, or a qualified doctor or a student.
2. Why does the economist exclude certain kinds of work from the category of Labour?
3. Why is work unpleasant? What would happen if all work were to become pleasant? Can we satisfy all our important needs by pleasant work?
4. What suggestions would you make for making work more pleasant and agreeable?
5. What other things than money can induce man to work?
6. What is meant by the phrase, Supply of Labour? How would you estimate the total supply of Indian Labour?
7. What has been the rate of growth of the population of India during the last sixty years. Why is it that even with a lower birth-rate, some other countries have a higher rate of growth than India?
8. What are the advantages and disadvantages of a rapidly growing population?

9. Why has the population of India increased very much during the last ten years? In what region was the increase greatest and why?

✓ 10. What do you understand by over-population? Is India over-populated?

11. The average density of population in Belgium is 654 and in India 195. What conclusions do you draw from these figures?

12. Why is the average density of population greater in British India than the Native States?

13. Is it good to have many large towns in a country? Compare town life with country life.

✓ 14. How would you compare efficiency of Labour? Is Indian labour as efficient as English or American labour? (P. U. 1937)

15. It is often asserted that Indian women do not work. Is the statement true? What is the proportion of women workers to male workers in India as compared with other countries if not, what not?

16. What do you understand by the term Mobility of Labour? On what factors does it depend?

17. There are many *purbiyah* labourers and Bengali clerks in the Punjab. How do you account for this?

18. What are the economic defects of the caste system? How did it originate and what are its essential features?

19. Why have the following industries developed in the places indicated?—

(a) Cotton cloth in Bombay, (b) pottery in Multan, (c) sports outfitting in Sialkot, (d) carpet weaving in Amritsar, (e) shawl making in Kashmir, (f) *kirpan* making in Amritsar, (g) bucket making in Jullundur, (h) weaving in Ludhiana, (i) wood work in Hoshiarpur, (j) glass in Lahore?

20. What is a market? Explain how the division of labour is limited by the extent of the market. How do markets affect exchange of commodities? (P. U. 1934)

21. Why have the following goods a world-wide market; gold, wheat, stocks and shares?

22. What is an organized market? Give examples.

23. Briefly explain the conditions on which the efficiency of labour depends? (P. U. 1934)

24. Define Market. What factors lead to the rise and extension of markets? Has extension of markets been beneficial to India? (P. U. 1936)

25. What are the economic effects of early marriage and caste system in India? (P. U. 1937)

26. What is meant by localization of industry? In what parts of India are the industries named below localized and what are the reasons for their localization there?

(a) Cotton industry, (b) Glass industry, (c) Leather industry,
(d) Iron industry. (P. U. 1937)

27. What form of division of labour is found in a typical Indian village? How does free trade affect division of labour? (P. U. 1933)

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28. What has been the growth of population in India in the present century? Explain how the increase in population in an old agricultural country influences the following :—

(a) Value of an agricultural product.

(b) Rent of land.

(c) Income per man.

(P. U. 1933)

29. Write a paragraph on the density of population in India. Do you agree with the view that from the economic point of view the density of population in India is excessive.

(P. U. 1934)

30. Is it correct to say that 'the market is limited by division of labour. Give your reasons.

Is division of labour necessarily beneficial?

(P. U. 1934)

31. Explain the economic meaning of the term Market. How do markets affect exchange of commodities?

(P. U. 1934)

32. Give an idea of the density of population in the different parts of India and point out the causes that are responsible for that density.

(P. U. 1936)

33. Wheat is called a commodity of the world market and fruits and vegetables are called commodities of the local or town market. Why? Do you know any means by which a commodity of the local market can be made a commodity of the world market? Give examples.

(P. U. 1939)

34. Explain (a) the significance of the universality of marriage (b) the early age of marriage, (c) the large proportion of widows in India to her population problem.

(P. U. 1938)

35. What is meant by "the efficiency of a factor of production"? Why is Indian labour not so efficient as Japanese or English labour? How would you attempt to improve the efficiency of our labour?

(P. U. 1938)

CHAPTER XII

✓ DEVELOPMENT OF ECONOMIC LIFE

The wants of primitive men were few and simple. Just as animals have only a few natural wants, which they can satisfy by what they pick up, so in earlier times men could satisfy their elemental wants by whatever they found around them in nature. Wild fruits, fish and animal flesh existed in plenty and could be obtained simply by taking possession of these; for shelter, natural caves were used. Primitive men had little or no control over nature and the history of human progress is, on one side, the history of growth in the number and variety of human wants, and on the other, the development of man's efforts to gain an ever extending control over nature and making it yield an increasing number and variety of forms of wealth for his needs. There are several well-marked stages in the development of the economic life of man.

1. Hunting Stage.

In this early stage man was very much like the wild beasts as he had only a few natural wants. He went about in search of food and took what he could find, lived by hunting and fishing, or on wild fruit, and used the skins of animals, or the barks of trees, for clothing. He took "little thought for the morrow" as he was accustomed to live on the spontaneous products of nature. Population was sparse, the people lived in independent families, which later developed into tribes, among whom there was often great rivalry, resulting in frequent quarrels and fighting. People originally had no fixed abodes, and no other use of a fellow man was known than to kill and eat him. As each

family provided for its own needs there was no exchange of possessions or services. Private property was unknown except perhaps in a few rude implements and the animals which were the subject of man's prey and appropriation. Man depended entirely on the vagaries of nature. The fishing tribes were a little more advanced as they knew the art of constructing boats or rough canoes and they led a more settled life than purely hunting tribes.

2. Pastoral Stage.

As a result of the constant hunting and fishing, the free store of animals and fish in a locality was likely to be exhausted; existence became more difficult until man discovered that he could benefit more by taming and breeding the animals which he was accustomed to kill. When he ceased to depend for food entirely on the killing or capture of animals and began to domesticate them then he entered on the pastoral stage; animals became his chief wealth and life became more peaceful and secure. It was less roving, but even yet men had no settled abode because they had to wander in search of pasture land for their cattle. The tribes travelled about and hence cities and villages were still impossible; there was inter-tribal warfare for the possession of land. Some tribes laid claim to certain districts for a time and tried to prevent others from encroaching on such land, but within the tribe there was no private property in land. Owing to the growth of wealth, people began to attach importance to things which appealed to their taste, and thus arose ownership in such articles as flocks, gold and silver, precious stones and woven fabrics. There was a little exchange of goods by means of barter. People owning flocks wished to leave them to their families and we see the beginnings of the institutions of inheritance.

3. Agricultural Stage.

A further advance was made when, along with the keeping of animals, man learnt the art of cultivation and crops were grown and harvested. Then the provision of

Food became more regular and more certain. Man found it to his advantage to stick to a particular plot of land. He passed from a nomadic to a settled life, and living in a particular place he developed friendly relations with his fellows : village communities were formed and with a greater variety of food, population began to grow. Land was still owned by the tribe, but with the growth of population, private ownership appeared. As the process of tilling required persistent labour it was found that other men could be useful and hence men captured in war were not killed, but kept as slaves. The people living in the villages produced all the things necessary to satisfy their own wants and obtained nothing from outside,—the community was self-sufficing.

The agricultural village stage lasted for centuries among many peoples. In European countries the movement for the building of towns began in the thirteenth century, but the agricultural stage "has not been wholly displaced by any subsequent stage of economic life but only modified—unceasingly modified with the lapse of time." In India it has lasted until to-day even though it is being gradually changed.

4. Handicraft Stage.

This came with the development of hand-made manufactures. Man by his skill transforms raw materials, learns to weave fabrics and to fashion clay, wood and metal.

Since very early times a little industry had been carried on in the families. The household or family devoted itself chiefly to the cultivation of land, but, in addition to the provision of food, it satisfied its own needs in other ways ; the various members of the family made clothes, utensils, implements and furniture, but gradually the professional craftsmen arose. Perhaps some specially skilled worker in a craft gained a reputation for his good work and took to the craft as his sole occupation. Hence division of occu-

pations emerged and some men became blacksmiths, shoe-makers, weavers, and carpenters. Villages grew into towns and towns grew larger. Whatever may have been the cause of such growth, whether the patronage of some monarch or leader, the existence of some place of religious worship and pilgrimage, or the existence of some art or craft, the division of occupations are evidence of the growth of social intercourse, which necessarily brings with it the development of economic relations and exchange. As the market developed, a distinct class of craftsmen sprang up in the towns, men making things for sale.

5. Craft Gilds.

In many countries each craft was organized into a Gild. The numerous small castes, or *baradaries*, in India, the *lohars*, *tarkhans*, *sunars*, and *julahas*, are nothing but the remnants of the gilds, or associations of craftsmen the object of which was to secure a monopoly of the trade and labour in the industry, set up standards of efficiency, secure a fair price, and regulate trade and industry for the benefit of the gildsmen. The growth in specialization meant also a growth in trade, but during this stage commerce was much restricted as compared with that of the present day. The towns made exchanges mostly with the surrounding villages; there were no national or world markets; such a general system of exchanges could not be carried by barter, and thus in this period money became of some importance. Most of the Indian towns are still of the type just described.

6. Domestic System.

The further growth of trade and commerce with foreign countries and the accumulation of money in the hands of merchants, increased the demand for manufactured products. Some more venturesome merchant, perhaps, found that there was a great demand for certain kinds of manufactures in other countries, at distant places in his own land. He found, may be, that some commodity fetched

a very high price and that he could earn large profits by selling outside his own district; then, instead of purchasing the article from the guildsmen, he bought the raw materials and the tools, offered inducements to the craftsmen to work under his direction and control, and took the finished product for sale. Thus the merchant-middleman became the capitalist and the independent craftsmen became simply wage earners; the distinct classes of employers and employed emerged; this system was called the "Domestic System" of industry because it was organized in the homes of the people.

7. Industrial Stage.

"It was a great step forward when man learned to manufacture at all; it was a transformation of society when man learned to manufacture by power." The industrial stage began with the inventions and discoveries that followed the adoption of the steam engine. The capitalist who could afford to own an engine and elaborate manufacturing machinery began to control industry; the worker could neither afford to set up a factory, nor compete with it, and so he had to seek employment under the factory-owner. Handloom weavers were thrown out of employment by the competition of machine made goods and those in India could not seek employment in the factories because the mills were set up in Lancashire. The advent of machinery completely changed the handicraft stage and the old economic organization was almost entirely swept away. Hence we get the name of "Industrial Revolution" to describe this great change, the chief features of which will be discussed in a subsequent chapter; meanwhile we will discuss the importance of machinery and the growth of capital.

SUMMARY

Human wants have developed, and man has found the means of satisfying these wants.

First there was the Hunting stage, when man was not much different from the animals. Then came the Pastoral stage when tribes of men wandered from place to place in search of pasture

land. The third stage was the Agricultural, which emerged when man learnt the art of cultivation. Tribes were now settled into village communities. Land was owned jointly, but private property and exchange had fully developed.

Meanwhile man had also learnt to wear fabrics and to fashion the materials of nature. Soon some skilled workers found it to their taste to specialize in a particular craft and so division into industrial occupations emerged. Craftsmen organized themselves into Gilds to protect the interests of their trades. Hitherto the worker was the master of his tools, but the Domestic System of industry developed, under which the merchant very often became the capitalist; he employed a few craftsmen, to whom he supplied the tools and capital.

With the application of steam to production and the development of machinery, large factories had to be set up, and thus a regular class of large capitalists emerged, who employed hundreds of workers in the factories.

Questions and Exercises

1. Distinguish between capital and capitalism? Is it necessary that where there is capital there should also be capitalism?
2. How has man gradually increased his power over nature?
3. What do you understand by human progress?
4. What were the Gilds? Is there anything at all comparable to the Gild system in vogue in India to-day?
5. Can the Caste System be likened to the Gilds? Compare and contrast the Gilds and the Caste System.
6. In what stage of economic development would you place India to-day?
7. What historical evidence is there of the existence of the Hunting and the Pastoral stages in India?
8. In what way has the development of the economic life of India been different from that of European countries?
9. What is Private Property? When and how did it come to existence?
10. How did the institution of inheritance emerge?
11. What is exchange? How did it begin?
12. What are the advantages of each of the following :—
(a) Exchange, (b) Private Property, (c) Inheritance
13. What are the principal stages in the growth of industry?
14. What are the differences between the Household, or Family System, and the Domestic System of Industry?
15. Trace the growth of (a) exchange, (b) capital, (c) markets, (d) division of labour, (e) private property, (f) co-operation, and (g) competition, through the various stages of economic development.
16. In what stage of economic development would you place modern India?

Do you find symptoms of economic transition in the Punjab?
(P. U. 1934)

CHAPTER XIII

CAPITAL.

Tools and machinery have given man an increased control over the forces of nature. Just as man can economise his labour by employing an ox, or by use of wind or water power, so he can save his labour by employing tools and machinery. An ingenious and enterprising people will always endeavour to produce more and more contrivances and instruments to aid in production, or to enable a given amount of labour to produce an increased quantity of goods. In this lies the economic superiority of a people ; it is thus that man obtains increased control over nature.

Consumers' and Producers' Goods.

Tools and machinery are wealth ; the more a nation has of them, the wealthier it is, but they are a special kind of wealth. These instruments do not satisfy wants directly they are not consumers' goods ; they help to satisfy wants indirectly by enabling us to produce other goods to satisfy wants directly. Consequently they are called producers' goods.

The basis of the distinction between consumers' and producers' goods is the purpose for which they are required. Capital differs from land and labour in that it is a derivative factor, as it is itself the product of land and labour ; it is a special kind of wealth. *viz.*, that which is not intended to be used for further production.

Land also is wealth which is not used for direct consumption but for further production. Like capital, it is an independent factor of production, but unlike

capital, it is a free gift of nature and its supply is limited. Capital is the product of human labour and its supply can be increased or decreased according to our needs; it may be described as wealth, other than land, which is intended to yield an income.

But how are we to judge whether a particular good is capital or not? It has been said already that the real test is the way in which it is to be used. If it is to be used for direct enjoyment, it is not capital; if used for indirect enjoyment, then it is capital; in the latter case the satisfaction is postponed) the "good" is not to be enjoyed immediately but to provide a means of enjoyment in the future. Time or futurity is the fundamental basis of capital. Such things as bread, milk and water usually spread over a short period or time. We may wear a coat now or next winter but this delay in use does not make an article into capital; only when the postponement is made with a view, not of consuming the "good" later, but in order to use it as an instrument for yielding increased enjoyment in the future, can the commodity be called capital; i. e., when present wealth is used with the idea of getting more wealth; when it is invested in order that it may yield an income. A farmer puts seeds into the ground, employs pair of oxen and a plough, and hires labourers in the hope that the seed will grow and bring him a harvest; he has invested his savings in, or borrowed money for, the seed, oxen, plough and labourers' wages; these are his capital; a bookseller collects a stock of books in his shop not for his own studies but with the prospect of earning an income from their sale at a profit; a man builds a house in the hope that the money invested in it will bring him a return in the form of rent, or save him from the expense of rent in the future. These investments are capital, as they are intended to yield an income. According to Marshall 'productiveness and prospectiveness are the essential elements of capital'; the same goods may be

capital in the hands of one person and consumption goods in the hands of another ; a harmonium is a consumption "good" in the hands of one who uses it for pleasure but it is capital in the hands of a professional musician ; it is a part of the latter's "stock in trade." If a peasant has Rs. 1,000 which he hoards, or gives in charity, then this money is not capital, but it would be capital if he employed the cash in production, or lent it to other people who paid him interest for the use of the money.

It should also be noted that although capital (just as other wealth) is reckoned in terms of money, all capital is not in the form of money, which like other goods, is capital or not, according to its intended, or actual, use. When it is capital it represents control over goods and it is then a measure of capital as of other forms of wealth.

Function of Capital in Modern Production.

Capital plays such an important part in modern production that the present day system of industrial organization is called capitalist production ; the growth of capital has increased man's control over nature very materially. Machinery can perform gigantic tasks, but before large scale production can be secured, capital has to be saved, tools and machinery prepared, and large sums sunk in the form of plant and buildings ; it is really an indirect method of production for a market. The producer has to estimate the demand and, in anticipation of income, finds and invests amounts of capital which performs its function only in being consumed ; its existence depends not on its preservation, but on its being used up, either at once (*e. g.*, coal) or slowly (*e. g.*, a machine). Capital in modern production is used for providing :—

I. Advances to labourers in the form of wages ; these are used for providing food, clothing, etc., until the results of the workers' efforts are available for use to the ultimate consumer, who does not pay for things until he receives them. Under modern conditions the process of

production is long and involved, hence the provision of subsistence for the workers is an important factor.

2. Materials for production. Industry, is mostly a process of shaping raw materials, or semi-manufactured goods, into finished products ; the raw materials must first be obtained in order to be worked up, and hence capital is necessary.

3. Appliances of production which consist of tools, machinery, buildings, etc. In order to set up a cotton mill, buildings, machinery and plant are required, as well as money to pay the workers and for the purchase of raw cotton. All this capital is invested in the hope of future gain.

Use of Machinery.

The introduction of machinery has revolutionized productive methods, and its use has extended with every development in the arts and processes of production. In the early stage of industry the tools and appliances were crude and simple ; men probably always sought for means to increase output and reduce heavy work, and as a result of inventions we have complicated and delicate machines at work to-day.

Advantages of Machine Production.

1. It increases man's power and command over nature ; tasks that would be impossible to accomplish without the aid of machinery can be done easily with its help, *e. g.*, a crane can lift very heavy weights ; it would be impossible without machinery for a ship to cross the Arabian Sea in a few days, or for a speech delivered in Bombay in the morning to be reported and read in the afternoon of the same day in Lahore ; it is only by means of the wireless, that while a speech is actually being delivered it may be heard on the other side of the world.

2. Machinery takes up work when it grows tiresome ; it relieves the monotony of labour. The work of folding

newspapers is dull and monotonous but a modern machine folds as well as prints thousands of them easily in an hour.

3. Work can be done much faster and far more accurately, regularly and uniformly by machinery than by human limbs. A newspaper press can print, fold and count 80,000 sixteen-page papers in one hour of running.

4. The output of labour may be increased enormously and this tends to reduce the cost of production. A sixteen-page daily newspaper may be sold for one anna; would this be possible without machinery?

5. Standardised production is made possible. Could we get all bricks of the same shape, size and form, or could all the parts of motor cars be made so exactly alike as to be interchangeable, without machinery?

6. Machinery has widened human outlook; generally, it makes the workers more intelligent and resourceful, and has rendered labour more mobile.

Disadvantages of Machine Production.

There is tendency in many places to inveigh against the benefits of machinery, and the principal arguments advanced by its opponents are:—

1. That it displaces labour; men are thrown out of work, and this involves great hardship for them, as it did for the Indian and Lancashire hand-loom weavers when the power loom was adopted. The argument, however, implies a serious misunderstanding of the position. Machine production may perhaps mean less labour at first, but very soon there is larger production and cheapened goods and therefore an increased possibility of their use. It is doubtful if the introduction of machinery has lessened labour by a single hour permanently; to-day there is a greater demand for labour than there was in any previous age. Whatever labour is temporarily displaced by machinery is soon absorbed by the making of more goods, of the same

description, of other goods, and into the making of machinery. The use of machinery does not mean less demand for labour, but cheapened goods and more varied consumption, *i. e.*, a higher standard of living.

2. By doing those things for man which he could do for himself, machinery is said to make him more easy going, dependent and weak ; *e. g.*, that since the introduction of railways men have given up walking long distances and have become dependent on the railways. Again, it is suggested that some day it might happen that machines may be invented to do everything for us. Machines have, however, made man more free, more independent, and stronger than he was before, they have increased efficiency. Was man more free in the olden days when travelling was unsafe and it was almost impossible to go from one place to another, or is he more free now when he can go easily wherever he likes.

3. Machinery, it is said, reduces work to routine and makes it dull and uninteresting ; a labourer to-day has to stand and go on feeding a machine ceaselessly for about ten hours a day, therefore his life must be dull and hence, it is argued, man is made into a machine. This may be to some extent correct, but it is also true that, for the most part, machinery takes up work just when it becomes dull and monotonous ; then work becomes nothing more than a repetition of certain movements, only then can machines take it over ; otherwise such labour becomes dull and irksome. Every weaver, whether on the hand, or power loom, has to perform the same operation over and over again, and the power loom relieves the weaver of much heavy and monotonous toil.

4. The worker in a factory is said to have no interest in his work because he has no interest in the product ; his work is without aim and object and therefore uninteresting. A labourer by hand is, however, presumed to do his work

with interest, and when the thing is finished to enjoy the pleasure of having done something, *e. g.* a shoemaker who has made an entire shoe feels happy when the shoe is finished, but a worker in a modern shoe factory has perhaps never seen a shoe of his own making. Machinery, however, need not necessarily divorce the worker from the enjoyment of the fruit of his labour; the factory worker may feel the same joy when he receives his wages and perhaps even more, when with his wages he can buy more things than he could with his hand-labour earnings.

5. Machine production is said to be antagonistic to art, that it means uniform production carried on without any artistic sense expressed in the work. Machinery is (or should be) made the servant of art in two ways:—

(a) For an appreciation of art there must be leisure, or at least leisurely work, and without machine methods this is not possible for the masses.

(b) Much of the work is preliminary to the work of the artist which can be done by machinery. Will a building be less artistic because much of the heavy work of dressing the stone is done by machinery?

6. Cheap and shoddy goods are made by those who have no interest in the product; they are not made to suit man, but man has to adapt himself to the goods. A factory turns out uniform shoes without any idea of the shape of the consumer's feet which have to adapt themselves to the shoe and not the shoe to the feet. The absurdity of this argument can be seen by any man who has worn a new factory shoe as well as an old shoe; people do not buy shoes which do not comfortably fit their feet, or which will not do so after reasonable wear.

7. It is argued that machinery cannot be employed according to man's convenience, that it cannot be put up where a man desires; he has to go to the machinery and thus large crowded cities have grown up with smoke and

slums, which are prejudicial to human health and happiness. Man has become the slave of machinery. The argument seems to overlook the fact that machinery has contributed immensely to human freedom. It has given man such control over nature, that obstacles to his free movement have been removed. The ocean once stood in man's way of going from one country to another, but ship-building has made him free to go about where and when he pleases. The problem of crowded cities also is capable of solution in two ways :

(a) By the application of electric power, which makes it possible to spread power over large areas and to avoid the crowding of people.

(b) Cities can be rebuilt on the plan of garden suburbs ; there is no necessity for over-crowding.

8. Employment of women and children in factories is held to be objectionable. So far as this is the case it can be, and is in many countries, prohibited or controlled by legislation, they were often more overworked under the Domestic System.

9. Machinery, by putting control of production into the hands of capitalists, is said to have produced great inequality of incomes ; that it tends to make the rich richer and the poor poorer. Capitalism did not, however, come with, but before, the use of modern machinery.

The tendency to form corporations has given a chance to all sorts of people to become share-holders ; people with small savings can invest them in business concerns ; but it is true, that unless small investors are organized they have little control. Again it may be argued that, although the rich have become richer the poor have not become poorer ; at the most, they are only relatively so, and even if that is correct, it may be that machinery, by making production cheap, tends to make

every consumer better off than before, since there are more goods available.

10. Machinery and division of labour are said to have introduced an era of competition and interdependence; that they have created strife and conflict between labour and capital. But this argument seems to overlook the fact that labour and capital were antagonistic before the modern machine age. Competition implies self-reliance and independence; even at its worst, it is not as tyrannical as custom. The problems of labour and capital are probably only a passing phase and a solution can be found for them; in any case they have nothing essential to do with the problem of the introduction of machinery.

11. Lastly, some critics argue that happiness does not depend upon the number of things we have, but upon the number of things we can do without, and that machinery does not add to human happiness at all. In reply to this it may be said that up to a certain point happiness does depend upon the amount of wealth in the possession of each human being; wealth may add to man's efficiency and thus increase his power of doing good. It is not wealth that leads to trouble but its abuse.

Generally it would seem that those who declaim against factory life do not distinguish between those things which are temporary and those which are permanent in the system. Long hours, insanitary conditions of work and frequent industrial accidents need not be the inevitable accompaniments of the use of machinery. The efficiency of machine methods makes leisure possible for working men and, when they use that leisure sanely, their condition will be far in advance of what it could be under more primitive methods of production.

SUMMARY.

Capital is wealth, other than land, which is used for the production of more wealth, or which is intended to yield an income. Productiveness and prospectiveness are its essential elements.

Capital is of great importance in modern production. It is used in the form of wages for labourers, purchase of raw materials, machinery, plant and buildings. Its use has immensely increased man's power over nature.

We know of no age where capital was not used in production, but primitive tools and implements were crude, simple and cheap while modern machinery is complicated, delicate, power-driven and highly expensive. It has revolutionized Production.

The advantages of the use of machinery are (a) that it increases man's control over nature, (b) relieves the monotony of labour, (c) makes work faster, more exact and uniform, (d) increases the output, and (e) reduces the cost of production.

There is perhaps a tendency in India to exaggerate the evils of machinery but it seems to be forgotten that its defects are generally remediable, while without its aid it would be impossible to enjoy many of the advantages of civilization.

Questions and Exercises

1. How would you distinguish Capital from Land, Labour and Wealth generally? Is all wealth Capital? Is all money Capital? Is Capital money?

2. Are the conditions ideal for the increase of capital in India? How far do facilities and conditions for the accumulation of capital exist in an Indian village?

3. What is the difference between the supply of consumer's and producer's goods?

4. Are the following Capital?—A book, house, carpenter's skill, sewing machine, needle, a knife, rupee, hoarded money, jewellery, money lent for consumption purposes, a lawyer's library.

5. What part does Capital play in modern production?

(P. U. 1935)

How does it differ from the part played by Capital in the (a) Hunting Stage, (b) Family System, (c) Domestic System, (d) Guild System.

6. "Indian Capital is shy."—Explain.

7. Write an essay on 'Thrift, a civic virtue.'

8. How would you increase the supply of Capital in India?

9. What is the difference between hoarding and investment?

10. It is said that machinery displaces labour. Can you give any example of such displacement in India? What happens to displaced labour?

11. It is said that a day will come when machines will do everything for man and that he will not need to work at all. How far does past history support the truth of this statement?

12. Do you know of any Garden City scheme in the Punjab? How far has it been a success?

13. Were old cities better than new industrial towns? On what lines would you construct new cities?

14. Distinguish between custom and competition.

15. Point out the advantages and disadvantages of capital in modern organization of production?

(P. U. 1935)

16. What are the effects of the employment of machinery in the process of production on the labouring classes?

(P. U. 1935)

CHAPTER XIV

MODERN INDUSTRIAL ORGANIZATION

Function of the Entrepreneur.

Land, labour and capital must be brought together in order that there may be production of wealth. Even under the simplest conditions of agricultural life, where a man has his own land, capital and labour, the exercise of some degree of organizing ability is required to get the best results. Different pieces of land are of varying degrees of fertility, and care and judgment are required in supplying capital and labour to them ; work should be started at the best time of the year and each operation must be undertaken in its proper order. Just as in the making of a good cup of tea where the various ingredients have to be mixed in proper proportions and care taken in its preparation, so in every industry the agents of production must be combined in the right proportions and in such a manner as to yield the best results. Some superintendence or control is necessary even in the simplest form of production but the necessity of organization becomes more important, when the various factors are owned by different persons or are situated in different places. Then it becomes necessary that there should be a fourth agent to bring them together in the right proportions, pay for them in advance, take the risks involved in production for an uncertain market and try to utilize the other factors of land, labour and capital so as to achieve the best results. These are the functions of the factor in production which we call Organization, Enterprise or Business Management. The person who supplies this factor is variously described as the Organizer, Entrepreneur, Captain of Industry, or Business Manager.

Forms of Organization in Agriculture.

The forms of organization generally met with in agriculture are simple. They are :—

1. **PEASANT PROPRIETORSHIP.** This is the simplest form of organization, as the cultivator is the proprietor of the holding on which he works. It is common in the *Raiyatwari* villages in the Deccan and in many villages in the Punjab; in Europe it is found in all countries, but more in some than in others. Its chief virtue is that the peasant proprietor takes more interest in his land than when he is merely a tenant. It is said that "the magic of property turns sand into gold," but the system has the following drawbacks :—(a) There cannot be large-scale farming because a single cultivator cannot own and till large areas of land. (b) It often leads to sub-division and fragmentation of holdings. In India, on the death of an owner, the property is divided equally among the sons under the laws of inheritance, and thus a holding is split up into small sections when there are many sons to succeed. This causes sub-divisions of holdings.

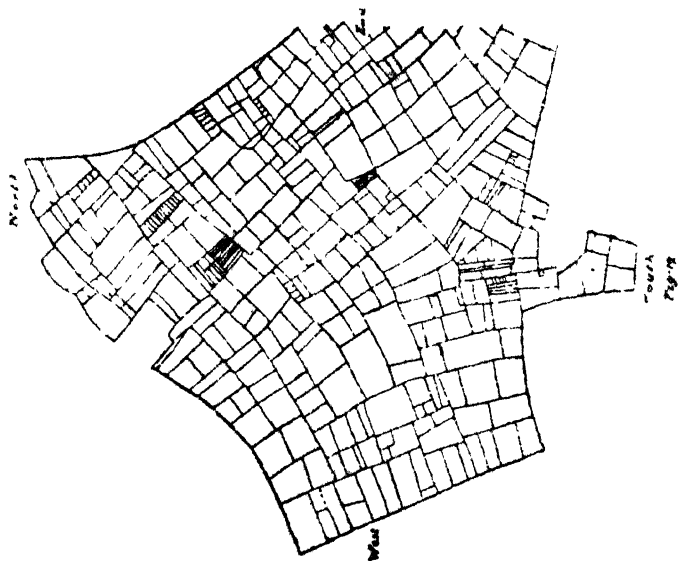
At the time of dividing the land among the new owners they are seldom satisfied with one compact strip, because the land held by their father may be of varying quality and each son wants to obtain a share in the best, if he is to have some of the worst, land. Thus the portion which falls to the lot of any one son does not form one compact holding, but consists of several pieces of scattered land, and we see the fragmentation of holdings. The cultivation of these small holdings tends to be uneconomic, because the cost of cultivation (expense on bullocks, plough, etc.) is the same whether a large or small area is worked. It is often too expensive to employ machinery and scientific measures on a small holding. It is difficult to arrange for a proper rotation of crops and for that intensive cultivation which is the chief merit of the system

of peasant proprietorship. The evils of sub-division are further intensified by fragmentation ; time and labour are lost in going from one field to another ; the management of scattered pieces of land and the protection of the crops from cattle, etc., is difficult ; boundary disputes arise and irrigation is rendered almost impracticable. The extent to which sub-division has developed in India is alarming. In the Punjab, for instance, 17·9 per cent. of the holdings are under one acre ; a further 25·5 per cent. are between one and three acres ; 14·9 per cent. between five and ten acres. In each holding there are, on the average, from three to four plots and some of these are so small as to make cultivation impossible.

Consolidation of holdings. The government of the Punjab is encouraging consolidation ; by means of *killabandi* scattered holdings were united in canal-irrigated lands and in 1920-21 the Co-operative Department undertook the work of consolidating holdings in other tracts. The interesting experiment originated in the Punjab in 1920. The procedure adopted in establishing a Co-operative Consolidation of Holdings Society is to call together all persons directly interested in land in a given village, persuade them to accept the bye-laws whereby a majority in a general meeting might approve of a method of repartition, and then carry out actual adjustment of fields in such a manner that no single individual might have any grievance. In fourteen years 4,41,720 acres were consolidated out of the whole cultivable area of about 30 million acres, at an average cost of Rs. 23·6 per acre. Improvement of agriculture is general, where holdings have been brought together, the village is decentralized and less crowded and therefore cleaner and healthier. The general effect of consolidation is to reduce the number of law-suits, on which agriculturists in the Punjab waste a large part of their subsistence. Consolidation has usually

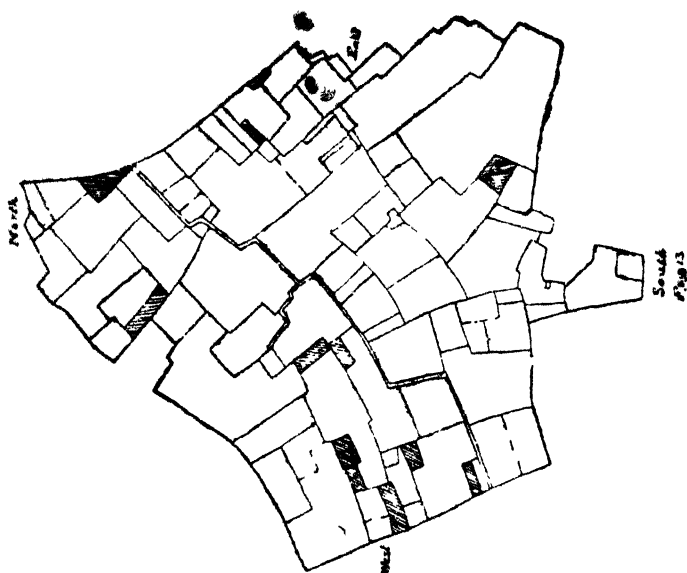
led to the making of gardens by the more energetic landlords by their new wells. Gardens, in addition to being profitable, make the village more attractive to live in and they improve the diet of the owner's family by the addition of fruit and vegetables.

"The material advantages which have accrued from consolidation are satisfactory. One man who could hardly rent out his plots at Rs. 13 per acre, after consolidating his holdings into one block of 13 acres, was able to sink a well on it and now gets Rs. 42 per acre. In another case the income has risen from Rs. 13 per acre to Rs. 32 after consolidation. The general estimate is that the yield per acre on consolidated land has doubled. Disputes of boundary encroachment, which are a source of great trouble in other areas, have disappeared from the consolidated areas. Supervision is made easy and cost of cultivation has appreciably decreased."*



Plan of the fields of a village in the Punjab showing the fragmentation of holdings before consolidation.

*Mr. H. Calvert in his Preface to the "Punjab Village Survey, No. 3 Tehong, in Jullundur District.



The holdings of the same village after consolidation

Societies for consolidation of holdings based on the Punjab model have been established in U. P., Baroda, and other parts of India as well.

This voluntary movement, however, provides only a temporary remedy and an effective check seems to be impossible without a change in the laws of inheritance.

II. CO-OPERATIVE FARMING. Co-operative farming has been introduced with great success in certain European countries, *e. g.*, Holland, Belgium, Germany, Denmark and Ireland, where peasant proprietors have joined together and formed societies for purchasing machinery and stock, as well as for the sale of their produce. Such co-operative societies mitigate many of the evils of peasant proprietorship.

III. LANDLORD, OWNER AND TENANT FARMER SYSTEM. Under this the tenant pays a fixed annual rent to the landlord, employs his own capital and cultivates for himself, the landlord making only the necessary permanent improvements. This system does not prevail in India, but it exists largely in England and the U. S. A.

4. **THE METAYER SYSTEM.** Here the landlord supplies not only the land but also most of the capital and the tenant pays a fixed proportion of the crop as rent. It is common in the Punjab and some other parts of India and is prevalent also in Italy and Portugal. In India, if the division of the crop is made on the threshing floor, it is called *batai*, but if an assessment of the shares is made from the standing crop, then the division is called *kankut*, and where the landlord's share is paid in cash at the current price of grain, it is called *amaldari*. Under this system the cultivating tenant generally does not take much interest in his holding, as his tenure is not secure, and also because he does not get the whole of the produce which is the result of his efforts. Further the oversight of the crop division entails unnecessary worry and trouble.

5. Collective farming has been introduced in parts of Russia, where both small and large holdings in each village have been organized into one large farm to be worked as one unit by the whole village.

Peasant proprietorship in the Punjab.

The Punjab is essentially an agricultural country, one half of which is owned and tilled by peasant landowners. There are a few large proprietors in most districts. But in the whole province the number who pay more than Rs. 500 land revenue, is less than 2500. The majority of owner's holdings in the plains are less than 10 acres, in the hills they are mostly 3 acres. We have seen above that two main drawbacks of the ownership of the land in small parcels by peasant proprietors are that there is danger of the reduction of the size of many holdings below an area sufficient to support a family in comfort and an equally serious danger of the land passing into the hands of the people who will not cultivate it with their own hands. Most small landowners can get additional

land on rent, and irrigation of large tracts of land has checked the evil to a great extent. Besides, the Government has also taken steps from time to time for the protection of the landowners of the Punjab e.g., by giving to members of a tribe or neighbours the right to purchase land in preference to the strangers, by restricting the transfers of land by landowners belonging to agricultural tribe and by exempting from sale in execution of decrees of land and other property of hereditary agriculturists.

Relation between Landlords and Tenants.

About 43% of the land in the province is tilled by the landowners themselves, 9% by occupancy tenants and 48% by tenants at will. The tenants at will are for the most part also landowners in the same village who own too little land of their own to provide a decent livelihood.

Whereas scarcity of land now compells many small landowners to work as tenants on other's land, in earlier times, when there was plenty of unoccupied land and population was sparse, competition was not among tenants for land but among Zamindars for Riyats. The original settlers in villages finding that they had more good land than they themselves could cultivate would endeavour to make a profit of it through the labours of others. The village community often gladly gave the surplus land to such persons who would engage to pay the Government share of the produce with an additional share to the community. As few people were prepared to clear a piece of land unless they were given some permanent interest in it, permanent tenants or occupancy tenants were created. Generally speaking, permanent tenants or Khud Kashat Riyats as they were called could not be evicted so long as they paid their rent. The temporary tenants were generally residents of other or neighbouring villages who could not obtain in their own village as much

land as they were able to cultivate and these were called paikash rayats.

Rent.

The rent of a tenant's holding is a first charge on its crops. The landlord cannot intermeddle with the tending, cutting or harvesting of his crops by the tenants. Where the rent consists of a portion of the produce the landlord has a right to take part in the division of the produce and to take his own share. The tenant on his part is bound, where the rent is taken by division (Batai) or appraisement (kankut) not to remove any portion of the produce at such a time or in such a manner as to prevent the due division or appraisement of the crops. Sometimes lump grain rents or rent consisting of a fixed amount of grain in the spring and a fixed amount of money in the autumn harvest are settled and these are called Chakota rents. Cash rents for particular crops which cannot conveniently be divided at fixed rate per Kanal or Bigha are called Zabti rents, while cash rents paid on land irrespective of the crop grown upon it are called Nakdi rents. The crops for which money rents are usually taken are sugar cane, cotton, opium, tobacco, vegetables and chari.

Tenants at will usually hold by the year only; leases for a term of more than a year being still uncommon. Neither the tenant can leave nor can the landlord eject him before the crops have been harvested. Notice of ejectment or a relinquishment may be given through the Tahsildar. The tenants for fixed terms cannot be ejected before the expiry of the term without a regular suit. Nor can occupancy tenants be ejected so long as they are prepared to pay rents.

Customary Dues.

There are in Indian villages certain kinds of customary dues which landowners realize from the other resi-

dents in the village or from particular classes of residents and these are known as village cesses. These are really in their origin seigniorial dues, such as are found in primitive societies in which certain persons or classes are dependent on other persons or classes for protection. The special features of these payments are that they are leviable by custom, they are not a payment for the use of private property, nor are they a payment for personal services. The chief examples of these are the following :—

(a) Marriage dues or fees are paid by nonproprietary and kamins in the village on marriage occasions in recognition of the village proprietors as owners of the village site. In Pinddadan Khan Tehsil for instance, this cess is called Haq Bakri and is levied for every daughter's marriage from all the non-proprietary of the village.

(b) Kamins or artizans cess is levied annually by the village proprietors from the kamins and artizans, generally weavers, residing and carrying on their trade in the village. This is known as Kamiana Atrafi or Muhtarafa.

(c) Kurikamini is a due paid by nonproprietary residents of the village such as shopkeepers.

(d) Tirni is dues for grazing cattle.

(e) Dharat is a claim for weighment fee on sale of grain.

(f) Ahrat is the commission paid to the dealer or broker through whom grain is sold.

(g) Malba is a cess imposed by landowners on themselves in order to meet common village expenses.

Land Revenue.

The income of Indian Government, whether native, or foreign has always been mainly derived from the share of the produce of the soil which the state claimed as its own. The first question which arises in connection

of land is its ownership. There are three different theories regarding the ownership of land :—

(a) Economic doctrine of public ownership or the nationalisation of land. According to this doctrine land is the free gift of nature and its extent and productive capacities are not due to the exertion of any person and therefore it cannot belong to any particular individual but must be considered the property of the whole nation. The Government as the representative of the nation must have its share from and should deal directly with the cultivator.

(b) English doctrine or the doctrine of absolute private ownership of land. According to this the land is the absolute property of the individual and the Government should not interfere in the dealings of the landowners with his cultivator.

(c) Indian doctrine under which there are three persons connected and concerned with the ownership of land. First the Government or the Lord Paramount, second the landlord and the owner of the land and third the tenant or the cultivator. As the ownership is shared so the income is divided by these three. The share of the landlord is called rent while the share of the Government is land revenue.

History of Land Revenue in the Punjab.

During the Hindu Period the rule was by families and each family was represented by its manager or head. Heads of families form the village council or Panchayat under the Presidentship of the village headman called Mukhiya. The village community as a body through the village headman was responsible for the payment of the revenue. Government share was from 1/6th to 1/10th of the gross produce. The liability of each proprietor was determined by the Panchayat and boundaries of fields were also determined by the Panchayat. Revenue was

collected through the agency of village headmen. Government share was taken by actual division of the grain on the threshing floor.

During the Mohammadan period this system was completely broken. The chief concern of the Mohammadan conqueror was how to administer the country and how to reward and compensate himself, his generals and followers to whose faithful services he owed his conquest. Some of the newly conquered territories were kept by the king himself under his own direct management to meet the expenses of Royal household and was called Khalsa Land. The rest of the territory termed jagir land was divided into military circles and granted to the generals and commanders with full administrative power. The grantees of the land were called Subas and Taluqdars. If the grant carried the obligation of rendering military services it was called *jagir*, otherwise *muafi*. Muafies were also granted to religious and public institutions and other persons whom it was desired to show favour. For jagir lands the grantees had to pay annual tribute or khiraj. In Khalsa land the amount of grain to be demanded from the cultivator depended on the will of the Kardar. Though the village panchyat lost all its powers yet the village headman was retained under the designation of Inamdar and his services were utilized in collecting Government dues.

During Sikh times the Punjab was divided into Cis-Sutlej territory and trans-Sutlej territory. In the former there were petty chiefs who exercised absolute powers in their villages and every question or dispute was decided by them according to their own judgment. They took as ruler's share the whole of produce from the cultivator leaving so much for him as would induce him to continue his cultivation. In the latter the ruler was Ranjit Singh who left no Sardar in absolute authority. His Jagirdars had no proprietary rights in land but they

were allowed ruler's share which was usually one-third. Over each Pargana (a group of hundred villages) was appointed a Kardar who exercised absolute authority and controlled the income and the expenditure of the villages.

As the Sikh Government left the country in chaos there were no records to refer to or to rely upon, therefore the British Government had to ascertain the rights and liabilities and customs of the rural population from enquiries made from the people themselves. The British Government wanted to get their shares in cash and after their experience in Bengal and U. P. adopted the system of Periodical settlements in the Punjab. Settlement means settling or determining the amounts of land revenue with the landowners. To assess the land revenue is the primary object of a settlement. It is necessary at the same time to decide who shall pay the sum assessed or in technical language with whom the settlement should be made. A settlement, therefore, consists of two branches (a) Assessment of land revenue and (b) Framing a record of all persons who are concerned with this payment.

Assessment and Collection of the Land Revenue in the Punjab.

For the purposes of revenue management the Punjab is divided into 29 districts each in charge of a Deputy Commissioner or a Collector. These Districts are grouped into five divisions each under a Commissioner. The Commissioner exercises control over all the Revenue Officers and Courts in his division and is himself subject to the general superintendence and control of the Financial Commissioner, who, under the Revenue Member of the Government, is the head of the Revenue Administration.

Mahal.

The unit of Revenue Administration in the Punjab is the

estate or *Mahal*, which is usually identical with the village or *Mauza*. Of these estates large or small, a Tehsil (an administrative sub-division of a district) as a rule, contains from two to four hundred. Each of them is separately assessed to land revenue, which it is the business of the Deputy Commissioner to collect and has a separate record of rights and register of fiscal and agricultural statistics which it is his duty to maintain. All its proprietors are by law jointly responsible for the payment of its land revenue, and in their dealings with the Government they are represented by one or more headmen or *lambardars*.

The land revenue of a holding or an estate being a cash commutation of the right of Government to a share of crops grown upon it, is properly declared to be the first charge upon the rents, profits and produce thereof. The gross income from an estate is technically called 'gross assets'. And the balance left after deducting the expenses of cultivation is called its 'net assets.' The Government's share is called standard of assessment. There are two ways of determining the land revenue as there are two ways of assessing the income tax. Where the rental of the landowners or the profits of tax payer are certainly known the matter is simple, But where rent is collected in grain or owners cultivate their own lands or rents are customary and not competitive, the assets of an estate have to be determined by an elaborate enquiry. The land in a tehsil is divided into several assessment circles and classified in accordance with the natural varieties of the soil. In each assessment circle a small area of each riped crop of the average type was reserved. It was reaped and threshed at the Government expense and thus an average yield of each crop growing in different classes of land was found out. This average yield valued at the prices current at the time of settlement was made

*

the basis of estimating the gross assets. The standard of assessment was reduced from $2/3$ to $1/2$ in 1871.

The bond which unites the proprietary body may be a strong and natural or a weak and artificial one. There are more compact village communities in the district of Rohtak and Karnal whose landowners are held together by the real or assumed ties of kingship, while the estates of the South-western Punjab are mere collection of independent well holdings and in the new colonies there is hardly any bond uniting the land-owners. Although legally all the landowners in an estate are jointly responsible this responsibility is not strictly enforced where the estates are only artificial groups of independent holdings.

Forms of Organization of Industry.

In industries other than agriculture the following types of business organization are to be found :—

I. INDIVIDUAL ENTREPRENEUR. In most countries, any person may set himself up as a business man, or entrepreneur, without any legal formality ; anyone who has money, or land or a shop, or who borrows money, or rents land or premises, may set up as a shopkeeper or manufacturer ; he takes upon himself all the risks, the liabilities and responsibilities of the business and he also therefore takes all the profits.* In law, the liability of the individual entrepreneur is unlimited, *i.e.*, if his "business" runs him into a debt, or if he becomes insolvent, it is not only the assets, or the resources of the business that will be liable to be attached in the liquidation of the debts, but his whole property ; there is no limit to the owner's liability to the creditors of the business. The business, or the "firm," however, may and shall be considered as something apart

* There are exceptions however as, *e.g.*, Germany under the present Nazi rule.

from the owner for purposes of accounting. The assets and liabilities of a business may consist of, say, *e. g.*,

<i>Liabilities.</i>		<i>Assets</i>	
	Rs.		Rs.
Capital	... 6,600	Cash	... 500
		Furniture	... 100
		Land or Premises	.. 1,000
		Stock	... 5,000
<hr/>		<hr/>	
Total	... 6,600	Total	... 6,600

Such a statement of the assets and liabilities of a business is called a Balance Sheet. The capital is placed on the liabilities side, since the business, as something distinct from its owner, owes it to him individually or to the person or persons from whom he has borrowed the money. The balance sheet makes a clear distinction between, say Mool Chand the man, and Mool Chand the owner of the business. The usefulness of the single entrepreneur form of business organization is mostly limited to small undertakings, where the capital and credit of one man is adequate. These are very common in India where large corporations are still few in number and therefore large scale industry is rare. Small scale organization is most suited to agriculture retail trade and cottage or shop industries; in India, thousands of artisans work on their own account and produce things on a small scale.

II. PARTNERSHIP. This is usually called a "firm" and it is a joint undertaking by individual entrepreneurs. It is usually found in mercantile undertakings of a moderate size, in small manufacturing establishments and in the professions. The joining of interests makes larger undertakings possible, but the personal liability of every member is relatively increased, as the liability of a partnership is unlimited and each partner is personally liable for the whole of

the debts of the firm as well as for the debts incurred by any fellow partner in the ordinary course of business of the firm. Such a form of organization has great advantages if the members act up to the principle "each for all and all for each," but otherwise it involves great risks. A partnership is dissolved on the retirement, or death, of a partner and is not at all well adapted to permanent large-scale undertakings.

III. CORPORATION. This form of organization is suited to large-scale undertakings and is a product of the Industrial Revolution. It affords the most easy and attractive way of collecting large amounts of capital from various sources by creating a legal or fictitious "Person," (whose life may be permanent) out of any number of individuals who may choose to join together. The liability of a member of a corporation is limited to the extent of his share in the business and thus it is called a limited, or a joint-stock, company. A corporation is a creature of law; its right to exist depends on a charter, or on the articles of incorporation or association approved by the state. The Indian Companies Act allows any seven or more persons, who comply with certain prescribed conditions, to form a company which must be registered; it allows these persons to raise capital up to a certain fixed maximum amount which is called the authorised capital. This limit is fixed, as otherwise, a company could grow to such an enormous size that it might even threaten the existence of the state. Capital may be raised either by borrowing, or by people taking stocks and shares. The borrowing may be either on the security of the

- (a) Company's own property ;
- or (b) Pledge of securities issued by other corporations ;
- or (c) Earning capacity of the business.

Such borrowings of a company are called its funded debt and are represented by bonds, which are mere promises to pay the money borrowed with interest after a specified time. These are of three classes in accordance with the nature of the security offered, viz :—(a) Mortgage bonds, (b) Collateral trust bonds, (c) Income and debenture bonds.

The stocks and shares of a company may be of various kinds of a certain fixed value each. A share may be purchased at market rate and the buyer becomes a shareholder, or member, of the company. He is then entitled to a share in the profits of the business and has a risk in the company, such risk or liability being limited however to the extent of his share.

The market value of the share rises or falls with the increase or decrease in the expected profits of the business. For instance, if A wants to invest Rs. 200 he may put the money into a bank on fixed deposit at say 3 per cent. per annum interest and earn 6 rupees a year on this amount, or he may purchase a 100-rupee share of a joint stock company for 200 rupees, and in this case also his income will be Rs. 6, if the company has been, and is expected to go on paying dividends at the rate of 6 per cent. per annum out of its profits. If, however, the company only pays say $2\frac{1}{2}$ per cent. dividends, then a share will probably sell for less than Rs. 100, as the market value of the shares rises or falls according to the comparative security of the investment and the expectation of profits.

A stock-holder is like a share-holder in almost every respect as the chief difference between a stock and a share is that the former may be of any odd sum and can be split up into small parts, while shares are always of a fixed amount and cannot be divided. A person may purchase stock of the face value of say, Rs. 487-5-4 but shares are always of certain fixed amounts and one may purchase any number of shares, e.g., five of Rs. 100 each, but at any market price

Stocks and shares may be Preferred, or Ordinary, or Deferred. In the case of the first mentioned a certain percentage of profits has to be paid before anything is paid to the ordinary shareholders and in turn the latter have prior claims over the owners of deferred shares.

India is, as yet, industrially backward and joint stock companies are comparatively few. There were only 663 joint stock companies in the Punjab in 1935 with a capital which stands no comparison with that of other countries. All the joint stock companies of the Punjab put together do not possess as much paid up capital as some single companies in England or in the United States of America. The deposits of the Midland Bank (£371,000,000,) exceeded the deposits of all Indian Banks put together, (£211,000,000).

The advantages of the corporate form of organization are numerous especially for large-scale business and industry; they make a large output possible. In 1905 in the U. S. A. although only one-fourth of the manufacturing undertakings were corporations, yet these produced nearly three-fourths of the total manufactured goods of the country. Some of the points of superiority of corporate over other forms of organization are :—

1. Share or stock-holders have no personal liability for the obligations of the company beyond the nominal value of their own shares.

2. Permanence and stability of the corporation are decided advantages in undertakings requiring large investments of capital in relatively fixed and permanent forms, such as banks, insurance companies, railways, etc.

3. Continuity of a firm is made easier.

4. Transferability of shares makes it possible for shareholders to enter or leave the business simply by purchasing or selling shares.

5. Existence of shares of small amount and of securities of various types afford opportunities to all classes of persons to invest their savings.

6. The corporation may thus attract large amounts of capital from many sources and employ it efficiently.

7. Concentration of power in the hands of directors tends to efficiency in management.

While therefore the advantages of a corporation can hardly be overrated in modern business life, there are a few dangers, especially in the early stages, of its use in a country. Opportunities of fraud are afforded to clever persons who set up bogus companies, declare false and fictitious dividends and thus, having attracted capital from poor people, vanish completely. Such "bubble" companies grew like mushrooms during the period from 1905 to 1915 in the Punjab and did great damage to the credit and industry of the province; good deal of the evil can be avoided however if adequate publicity is given to corporation accounts. The legislature can also provide other safeguards,* although it must not be forgotten that honesty in business affairs is the *sine qua non* of progress for a country as well as for individuals. We can now show the balance sheet of a corporation drawn up as follows:—

LIABILITIES.		ASSETS	
	Rs.		Rs.
Subscribed capital divided into 700 shares of Rs 100 each. ...	70,000	Land and buildings ...	50,000
Capital paid up ...	70,000	Machinery ...	20,000
Income reinvested ...	5,000	Raw materials, work in progress, and finished goods ...	25,000
Accounts payable ...	20,000	Accounts receivable ...	5,000
Undivided profits ...	7,000	Cash in hand ...	20,000
Total ...	102,000	Total ...	102,000

IV. Co-operation.

In this form of business organisation an attempt is made to do away with the middlemen in industry and

*The law relating to companies was that contained in the Indian Companies Act of 1913. The Act is based on the English Companies Act of 1908, which has since been revised and replaced by the Companies Act of 1929. The Indian Companies Act of 1913 has now been revised by the Amending Act of 1936.

commerce where workers or consumers of the product themselves control the several factors of production and direct the business through elected members or paid managers. In return for the risks and expenses which they bear, the members share among themselves the profits of the undertaking; in the co-operative form of undertaking the workers or consumers take over the functions of the entrepreneur and secure their reward.

Co-operation may be of two types :

(a) *Productive*. In this form the artisans or workers unite as producers, subscribe capital, or borrow on their joint responsibility, and become their own employers. They generally place the management in the hands of one of their members, who is paid a fixed salary. This form of co-operation has not been gradually successful, chiefly because of the absence of an effective organization, or lack of capable business managers, or jealousy and want of discipline among the workmen, or from a combination of two or more of these things.

(b) *Distributive*. Here the consumers unite to purchase their requirements of commodities, and receive their share of the profits in proportion to their purchases, not according to the amount of the capital invested, as is usual in an ordinary joint-stock company. The consumers' societies, or co-operative stores, as they are sometimes called, buy things wholesale from the producer and then retail them at market prices to the members of the association. Such societies have been very successful in many European countries and are being introduced in India also with some success.

Co-operative enterprise is now developing and co-operative societies are extending their functions in various ways in many lands. We have already referred to co-operative farming and will discuss in detail the organisation and growth of the co-operative credit societies in India in a subsequent chapter.

SUMMARY

Although some amount of organizing ability is necessary even in the simplest undertaking, the functions of the Entrepreneur have been separated in discussing modern business undertakings of a large size.

The chief forms of organization in agriculture are :—

(i) Peasant Proprietorship, in which each cultivator is owner of his little farm, and is likely to take some interest in his little plot of land and try to put it to the best use. This does not, however, permit of large-scale agriculture and in India it has led to sub-division and fragmentation of holdings which are very uneconomical.

(ii) Landlord-Owner and Tenant-Farmer, where the tenant pays a fixed rent to the landlord. The latter is frequently an absentee who takes little or no interest in the land; the tenant also has usually no permanent interest, or the means to invest large capital, in the land.

(iii) Metayer System. Here the landlord supplies land and capital and the tenant does the cultivation, each receiving a share of the crop, either on the threshing floor, or by assessing its value while in the field, or in cash at the market price of grain. The tenant frequently takes very little interest in the land he cultivates and is often entirely at the mercy of the landlord.

The four forms of industrial organization :—

(i) Individual Entrepreneur, where the sole proprietor has the entire responsibility of the business; if it succeeds, the gains are his, if it fails he loses. It is best suited to small undertakings.

(ii) Partnership, or joint undertaking by two or more persons. The liability of each member is unlimited and every partner is responsible for the debts of the entire partnership. This form of business is attended with great risk and responsibility. It cannot be permanent as the partnership ends on the death, or withdrawal of a member.

(iii) Corporation. The development of this form of organization has greatly facilitated the growth of large scale undertakings. Large amounts of capital can be raised by giving to every one, even those with small savings an opportunity to invest in business by becoming a share, or debenture-holder, and the responsibility is spread over a large number of people and each shareholder's liability is limited to the extent of his shares. The company thus formed is a separate person with a possibility of permanent life. The management is placed in the hands of a board of directors.

(iv) Co-operation, where workers or consumers supply the capital and take on the functions of the Entrepreneur.

Questions and Exercises

1. Draw up the balance sheet of the following :—

- (i) Joint stock bank.
- (ii) Partnership.
- (iii) Shopkeeper.
- (iv) Peasant Proprietor.

2. Prepare maps of the fields of any Indian village showing the area, ownership, tenure, methods of cultivation and capital employed on each field.

3. Select five landowners in any village you know. Find out how much land each of them holds and into how many pieces his land is divided. What is the total produce of his land and how many persons live entirely on that produce alone?

4. Select one big and one small farm in a district and compare their productivity.

5. Study the organization, working and achievement of any Consolidation of Holdings Society in the Punjab.

6. What is Primogeniture? What are its economic advantages? What obstacles are there to its introduction in India?

7. What is a tenant? What does he obtain from the land?

8. What is Partnership? In what industries do partnerships generally exist in your town?

9. What is the difference between authorised, subscribed and paid-up capital?

10. "The shares of the Punjab National Bank are being sold at a premium."—Explain.

11. If the shares of the National Bank of India were sold at par when it was paying a dividend of 6 per cent when the market value of Rs. 100 share is Rs. 200, what dividend do you expect the bank must be paying?

12. Briefly describe the characteristic features of organization in (a) joint stock company, (b) co-operative society. (P. U. 1933)

13. How can you account for the low agricultural income of India? Show how consolidation of holdings can improve the natural condition of the agriculturist. (P. U. 1933)

14. Describe the various forms of land tenure in India and characterise the system that prevails in the Punjab. (P. U. 1933)

CHAPTER XV

THE INDUSTRIAL REVOLUTION

or

ECONOMIC TRANSITION

The Industrial Revolution in England.

England was the first country in the world to pass from the handicraft to the industrial stage. The change was so rapid, it broke down the old order so completely that it is usually called an "Industrial Revolution;" the method of production and distribution of wealth were so fundamentally altered that all the economic functions of society were changed. There was much confusion and suffering, much of which was needless; but, even if men had been willing, they probably did not know how to avoid the manifold evils, which arose during, even if not as a result of, the rapid changes in the early nineteenth century.

England before the Revolution.

Agriculture. In 1760 England was primarily an agricultural country; probably more than half the workers were engaged in agriculture, but a large number were also engaged in manufacture as well as working on the land. Much of the land was worked on the old three-field system of common cultivation, under which the land attached to a village was divided into arable, meadow, pasture and waste. The arable area was divided into three large fields, one of which was left fallow each year, while on the other two, wheat, barley or other crops were grown; the meadow land was also similarly divided but the pasture and waste were common land, *i. e.*, available for the use of all. The farm workers were tenants who had certain definite rights in the village land.

Manufacture. Any manufacturing that was carried on was, for the most part, done in the homes of the people and was therefore a Domestic System of industry. Apart from agriculture, the principal occupation of the people was the making of woollen cloth, the spinning and weaving of which were done by hand, although a few improvements had been made in textile machinery. In 1733, John Kay made an important improvement for increasing the output of the weavers, when he invented what is known as the fly-shuttle to carry the weft across the warp; this enabled a loom to be worked much more rapidly. About 1738, Paul and Wyatt invented a roller spinning machine but, like Kay's shuttle, it did not come into immediate use; there were very few factories at the time; a merchant might get together thirty or forty looms in one place, but even this nearest approach to the factory system was very rare in those days.

Trade Most trade was done by hawkers, or at the weekly markets and great annual fairs. Buyers and sellers, with their goods on the backs of pack horses, went about the countryside buying raw materials and selling manufactured goods. The roads were very poor and consequently carts were little used for the carriage of goods before the later years of the eighteenth century.

There was little specialization in industry, and foreign trade was small compared with to-day, but larger in England than in most other countries. Communities were much more nearly self-sufficing than they are to-day: the workers were less dependent on capital; trade was steadier because production was carried on for the purpose of supplying a small and well-known demand; the tools required in most industries were simple, and easily secured, and the power utilized in their operation largely human; there was little need for vast aggregations of capital. In fact the country at the time was still medieval; it was relatively quiet, and undisturbed by the roar and bustle of a big trade and commerce.

Coming of the Revolution.

The change began with improvements in cotton machinery, iron-working and coal production. After the inventions just mentioned, we have the spinning jenny invented by Hargreaves; then came the water-frame for spinning (which bears Arkwright's name even if it be very doubtful whether he invented it) and this was followed by Crompton's mule; a few years later, Cartwright made the power-loom which ousted the hand-loom. The improvement of the steam-engine came about the same time as the textile inventions, largely owing to James Watt, to whom we owe the practical and comparatively economical, steam engine which revolutionised power in modern industry. Alongside of all this came the improvement in the process of melting iron by the use of coke (produced from coal) instead of charcoal (made from wood). These changes made it easier for people to start factories; a stimulus was given to the production of wealth; towns and factories began to grow, and the whole face of the English countryside was changed.

In the earlier stage of the Domestic System of industry we find the worker usually providing his own tools and implements, purchasing his own materials and marketing the finished product himself; in short he was his own capitalist. The few instances in which the domestic form of industrial organization has survived until our own day (*e. g.*, a boot-repairer or village tailor), usually have this same arrangement. Some, however, had the later (and probably more usual) form, where a capitalist entrepreneur provided the raw material and collected the finished product. Circulating capital was in the hands of these merchants, while the fixed capital was usually owned by the workers; sometimes, however, the merchant owned the machines also, as is the case to-day in many lands with such people as the "outworker" seamstress. Both kinds of organization existed side by side and it is difficult to decide which was the predominant form, but it is probably true to say that by the eighteenth century

the characteristic form of industry was capitalist as by that time the actual workers were mostly employed directly by the merchants, who found the raw materials, marketed the finished product and paid the workers for what they had done.

It seems difficult then to agree with those who maintain that the Domestic System was organised on a non-capitalistic basis. This may have been true in its early stages; but as has just been suggested, we can see the gradual rise of the merchant, or the pure trader, the "Middleman" who, even, before the Industrial Revolution, had in many cases, developed into an "Entrepreneur" and who is hardly to be distinguished in any way from the modern representative of the type, except in the extent of his operations. True, the relations between employer and employed were much closer than they are now; they were much more personal; more like those existing in domestic service to-day, or say, between employers and those clerks who come into close contact with the heads of business firms.

Factory industry, however, needed a capitalist form of organization for its full development. The larger single machines which have been made, and the modern expensive plant, could not be erected in the homes of the workers, nor even owned by the small master, to say nothing of the ordinary workman. Capitalism then, even if it were not introduced by the factory system, rose to greater prominence under its aegis.

England after the Industrial Revolution. Production in a Factory.

By 1840 England had been completely transformed. In place of the small, scattered, open plots there were large enclosed fields. Although the production from the land had increased enormously, England had become an importer of raw materials and food grains. The domestic system and small industries gave place to the factory system and larger concerns. Under these the output was enormously increased, not only by reason of the machines used, but also because of the greater division of labour and the

consequent increase in the skill of the workers. Instead of one handworker, turning out a finished product, we find many workers each filling a particular niche in the organization, performing only one of the processes in the production of a commodity. The methods of transport were revolutionised; foreign lands and colonies were opened up to supply raw materials and to furnish a market for the sale of the finished products of Britain. The ever-extending markets increased the demand for vast amounts of capital and therefore an increase in its relative importance compared with labour; money was necessary to erect factories, buy machinery, and initiate industries.

Against the factory system with its advantages, the hand workers could not compete successfully; they were compelled to give up the work in their homes and enter the ranks of the factory labourers. The new machinery, soon threw out of employment a number of those who worked by hand. This is usually the first effect of the introduction of machinery even if more people are employed afterwards. Machinery enabled women and children to do the work of grown men in many cases, and made all classes of workers necessarily more dependent on capitalist employers; it introduced an era of hitherto unheard of competition, but at the same time there was increase in the national wealth, a vast extension of internal and external trade and a big movement and growth of population. Generally there were fundamental changes in the social and economic organization of the country as a result of what has been called the Industrial Revolution.

The use of the term "Revolution" to describe these changes is, however, apt to give a wrong impression of what took place, unless it is clearly understood that the changes were not cataclysmic. We may say that a great movement began in the second half of the eighteenth century (but even that is not quite correct), and certainly the change was not finished in 1840. Nor is it yet for that matter; we

may only be in the middle of the movement, certainly not at the end. Even if we regard the Industrial Revolution as finishing about 1840, it had then taken about a century to work out. Let us say that a series of changes began about the middle of the eighteenth century and that they are still going on such as inventions in steam, coal, iron, machinery, transport and industrial technique generally; chemical discoveries; changes in capital and banking arrangements. It was a sudden movement in some respects, *e. g.*, the cotton trade was trebled in fifteen years (1788-1803), but it was very gradual in other ways. It was a complete change, however, as it materially affected the industrial and social life of Britain; the country was made into a different place altogether in the hundred years from 1750 to 1850.

Other Countries.

We may now examine how far these changes had their counterpart in India. Morison divided the countries of the world into two broad categories :—

(i) Those which belonged to the new economic order and had not passed through an industrial revolution; *e. g.*, Turkey, Egypt and India.*

(ii) Those of the new economic type that had been through an industrial revolution, *e. g.*, England, France, Germany and the U. S. A.

Characteristics of the Old Order.

The characteristics of the industrial life of countries of the former type are :—

1. Preponderance of agriculture.
2. Isolation and self-sufficiency of village communities.
3. Prevalence of custom and status.
4. Absence of competition.
5. Simple and imperfect division of labour owing to lack of transport facilities, and narrowness of markets.
6. Prevalence of barter and little use of money.

*Since Morison wrote : countries like Turkey and Egypt have made remarkable industrial and economic progress and their economic systems have undergone striking changes.

7. Small-scale manufactures carried on by independent workers in their houses, or by guilds, or by the agriculturists as a subsidiary occupation.

8. Absence of a big capitalist.

9. Lack of satisfactory facilities for credit and the prevalence of usury.

Characteristics of the New Order.

In contrast with the above the characteristics of the countries of the new order are :—

1. Preponderance of industrial and commercial occupations.

2. Existence of towns and a large urban population.

3. Unification of national life and the interdependence of different specialized communities and territories on each other.

4. Freedom of contract and open competition. (Note however the modern tendency towards a modification of these by state control of industrial conditions, and the elimination of fierce competition by various forms of industrial combination such as trusts and kartels.)

5. Congregation of armies of workers in factories and in towns.

6. Complex and better division of labour owing to greatly improved means of transport and communication and the opening up of world-wide markets.

7. Large scale power manufactures requiring the use of large amounts of capital.

8. Existence and use of money for practically every business transaction.

9. Development of credit and banking and the general absence of usury as distinct from interest.

Economic Transition in India.*

India at present is in a state of slow economic transition ; the old order is gradually giving place to the new but

*To some extent the term Economic Transition is unfortunate, if not quite useless, as all countries are always in a state of transition ; conditions are never completely static.

is very slow. Nor is the rate of progress uniform, as some parts of the country have developed much faster than others. There are, however, distinct signs of movement and in order to understand the nature of this change, we must examine the old economic organization of the country.

Indian Village.

The predominant characteristic of Indian economic organization is the division of the country into villages. India is still a land of villages, these are the units of the economic organization of the country ; most of the people live in them and not in towns.

"The typical Indian village has been described as an aggregate of cultivated holdings, with or without some waste area attached, having usually a central site where the dwelling houses are congregated together with the lands of the village spreading round about the central site in a series of concentric circles. In some cases small homesteads and farm buildings are found separately located on the holdings, though for better security and other reasons it is usual for the cultivator to have his house in the village dwelling area. The village often boasts of a grove and some kind of public office where the village officers keep their books and dispose of their business."

Kinds of villages. There are two classes of villages in India :

- (i) Severalty or Ryotwari villages.
- (ii) Joint or landlord villages.

The *severalty villages* were founded when the people lived in tribes. Land is held separately by each cultivator who is also its owner and is directly responsible to the government for the payment of land revenue. Villagers of this type are found in the Deccan, Central Provinces and Bengal.

The joint villages are those in which the landlords or landowners are jointly responsible for the payment of revenue. They may be :—

(a) *Ancestral i.e.*, those in which the descendants of a single landlord are co-sharers in the land; these exist in the Punjab, United Provinces and Bengal.

(b) *Tribal*, in which the community of landlords belong to a single tribe and all members are jointly responsible for the payment of revenue through the *Lambardar*, as is common in the Punjab.

(c) *Associate*, or those in which the landlords are not descendants of a common ancestor, but willingly hold the land together and have voluntarily accepted a joint responsibility for the payment of land revenue to the government.

Village Organization.

Each village was formerly almost a self-sufficient economic unit. The capital, labour and skill required to satisfy the simple wants of the people were to be found mostly in the village itself. The cultivators and their families worked on the open, sub-divided fields; they provided their own wooden plough, owned a pair of oxen and other small capital goods. They undertook the risk of cultivation, carried their surplus produce to the nearest market and exchanged it for salt or other small necessities and luxuries not available in the village. This has not been very much changed even to-day.

Administration.

The village, with its own officers, is the unit of administration in India. The headman is the village officer called a *lambardar* who is generally a hereditary officer, is very important in the village organization, as he is responsible for peace and order as well as for the collection of the revenue of the village. He receives *pachotra i.e.*, a share of the money collected, or has a plot of land, called

watan land as remuneration for his services. The headman in the Punjab transacts the business of the community, including the management of its common fund (*malba*), to which all contribute and to supplement which, in many villages, a hearth or door tax is imposed on all residents who are not members of the village.

Then there is the village accountant, or scribe called *patwari* or *kulkarni*. He is a government official who prepares and keeps the land records and village accounts. He not only registers transfers, devolutions, acquisition and extinction of rights in land, but also prepares the records of possession, cultivation, produce, payment of revenue, and cesses of field. There is also a village watchman, or *chowkidar*, who in addition to his ordinary duty of "watch and ward" has to report crime, arrest offenders and help the police generally; he has also the duty of reporting births and deaths. In some villages there is also a village messenger, and in all places, there are village servants, artisans and menials, called *kamins*.

Formerly most villages had their *panchayats* or bodies of elders, who decided disputes between the residents. Even now in some places in the Punjab, under the Village Panchayat Act, they have been given powers to decide petty disputes. Other duties of the *panchayats* are to improve the conditions of village life and to look after the sanitation, *e. g.*, the constitution and maintenance of wells, tanks, drains, roads, etc.. In addition to these multifarious duties the *Panchayats* may take upon themselves the optional duties of improving cultivation, agricultural stock, developing cottage industries, maintenance of libraries, the prevention of nuisances, and the supervision of the conduct of *patwaris* and other petty officials. The panchayats suffered from the stagnation of previous years. But whenever the head of the district had taken keen interest, steady improvement was noticeable.

In 1939 the Punjab Government passed "The Punjab Village Panchayat Act" which gave greater powers to the panchayats. Now the Panchayats can try on petition the civil suits for money or goods due on contract, for recovery of movable property and for compensation for wrongfully taking or injuring movable property, when the value of the debt, demand or compensation does not exceed two hundred rupees. By special notification the Government can empower a Panchayat to hear any case, the value of which is upto Rs. 500. A number of offences are cognizable by the Panchayats under the Indian Penal Code, Vaccination Act, Punjab Laws Act and under the Northern India Canal and Drainage Act. A Director of Panchayats has been appointed who has been given staff of about 36 Panchayat officers and more than 100 Assistant Panchayat officers. Under the provisions of the Act and with the help of specially appointed staff a mass propaganda is undertaken in every district. At the end of year 1938-39, the number of Panchayats in the Punjab exceeded 1,500 and a fairly large number of Panchayats are gazetted every week.

Village Artisans.

We have mentioned in previous chapters the village artisans whose occupations are like that of *lambardars*, hereditary. They are given sites for houses in the village *abadi* and are paid not for each job of work done but by a fixed share of the produce at each harvest. "The peculiar feature of Indian rural life," says the Indian Census Report of 1901, "is the way in which each village is provided with a complete equipment of artisans and menials, so that, until the recent introduction of western conditions such as machine-made cloth, kerosene oil, umbrellas and the like, it was almost self-supporting and independent, except in the matter of salt, and a few other luxuries purchased at the village fair or brought in by the *lamans* or *caravans*."

Village Self-sufficiency.

The village was formerly more or less cut off from contact with the rest of the world, since the only means of communication and transport available were the pack animals and country carts. Exchanges were therefore naturally confined to those things which could be easily and safely carried. Internal trade remained undeveloped altogether until the middle of the nineteenth century, and there are still many possibilities for improvement. As they were completely isolated from the world, the villagers were compelled to make their own arrangements to obtain all their simple, everyday requirements. Ordinarily there was no difficulty, but in time of famine there was great distress, as the market was limited and the condition of rural industry was very backward; most of the payments were made in kind and the use of money was rare. Grain was the standard of value and was used by the villagers in their small exchanges with each other. The rates of payment were determined by, "a minute and complicated, but a well understood set of village customs." Custom rather than competition governed the dealing of the villagers who were (and are) conservative and immobile. The caste and joint family system did not allow much freedom of movement; a man had no real choice in his occupation, or of his standard of living, or residence; his status and position in life were fixed by birth.

The rents paid by the cultivators to the landlords were fixed by custom and remained more or less unchanged from one generation to another. The payment to the *kamins* and other village servants also remained unchanged, but as these were a sharer of the produce, they automatically adjusted themselves to the condition of the harvest and thus to the economic condition of the village. Towns

were very few in number and for the most part were of religious, or historical rather than of commercial, or industrial, importance.

Rural Transition—Its signs.

The organization of the village community and its economic life described above are undergoing a change, the signs of which are :—

(i) The increasing dependence of the village on the outside world as, owing to the contact with western civilization, the standard of living of the people has undergone a change. Cloth, matches, kerosene oil, sugar, tea, scissors, bangles, mirrors, sewing machines and many other articles are now obtained from outside. (It is rare to see a barber in any village who does not use one of the new small hair-cutting machines). Because of their usefulness such things have readily found a market and have now become almost indispensable. The village has also begun to grow crops for the outside world and although there is no striking change either in the organization or methods of agriculture, cultivation on a small scale by small farmers is still the rule, yet there has been a commercialization of agriculture. Crops are now grown not for domestic consumption only but also for sale at a profit. The opening of the Suez Canal and the revolution in the methods of transport during the nineteenth century, linked up Indian grain crops with the world market. Certain regions of the country confine themselves to the production of special crops, *e. g.*, in Bombay cotton, Bengal jute, Punjab wheat. Produce markets have come into existence with their dealers and agents who specialise as export merchants.

(ii) The nature of famine calamities has changed along with the break up of the isolation of the village, "Formerly because food was grown for internal con-

sumption, whenever there was a scarcity, no food could be imported from outside and people suffered from hunger and starvation. Now, no given area or region need suffer for want of food, because grain can easily be transported from one place to another and there is one world price for food grains. The effect of a scarcity of food now a days ought not to be starvation in any particular locality, but a rise in their price, and hence for those people to suffer who cannot afford to purchase grain at high prices. Food famines to-day have become really money famines."

(iii) A money economy has taken the place of exchange by barter. The natural result of contact with the outside world is an influx of money, because people who go out of the village to work and trade send their earnings to the village in the form of money and those who sell crops outside receive cash in payment. The increasing supply of money and the convenience of its use has made it the common medium of exchange in the villages as well as in the towns.

(iv) The village population has become more mobile, the people find it desirable to supplement the income from agriculture and thus they endeavour to find opportunities for employment in urban areas. The construction of railways and development of motor transport have made it more convenient to go from the village to the neighbouring towns to work during seasons of leisure. Thus the old fixity of occupation is being affected, the influence of caste and status is weakened and the conservatism of the people is modified by contact with the outside world. The village artisans, who are thrown out of employment in consequence of the competition of machine-made goods, have to give up their old occupation, and in many cases they move to the town to work as day labourers.

(v) Rents, wages, and prices are governed more and more by competition, and the influence of status and custom is reduced. The blacksmiths and carpenters, who have now opportunities of finding employment in towns, do not so readily accept the customary remuneration of the village, if it is much less than what they can get elsewhere. Rents and wages are now paid mostly in cash ; competition between tenants has set in and the check to this has been provided by the enactment of tenancy laws in various provinces.

Causes of the Change.

The forces that are leading to the change have already been indicated and may be summed up here :—

(i) The unification of India under one strong government with continued peace is one of the important influences leading to changes in economic life. The old governments and ruling dynasties gave little thought to the needs of the cultivators ; they usually gave the villages to some big landlords and made them responsible for the payment of the revenue. The British Government deals directly with the peasants and holds them either severally, or jointly liable for the payment of revenue. The political autonomy of the village has been broken by the establishment of a strong central government, the institution of civil and criminal courts and the present revenue and police organization.

(ii) The impact with Western civilization has changed the outlook of the people. Their needs, mode of life, ideas and ideals are all being revised.

(iii) The revolution in transport effected by the construction of a new network of railways and roads since the middle of the nineteenth century, has broken down the isolation of the village and brought vital changes.

(iv) The welfare work of the government departments in irrigation, agriculture, education and co-operation, has

not only made the people conscious of a new national life, but has been of considerable enlightenment to them ; it has improved their economic, and in some cases their intellectual life, and has shown to them various channels of progress and beneficial changes.

Transition in Industry.

At a time when Europe, (the birthplace of the modern industrial system) was inhabited by uncivilized tribes, India was famous for the wealth of her rulers and for the high artistic skill of her craftsmen. Even at a much later period, when the merchant adventurers from the West made their first appearance in India, the industrial development of this country was at least not inferior to that of the European nations. The skill of Indian artisans has from early times enjoyed a world reputation. India was famous throughout the world for delicately woven fabrics, woollen shawls, sandal-wood boxes and cutlery as well as for the working of metals and precious stones. Indian goods were exported to ancient Greece, Rome, and Egypt ; in Moghul times cotton and silk goods were exported to Persia, Syria, and Arabia.

Urban industry in India at the beginning of the nineteenth century consisted chiefly of handicrafts producing fine textiles and other luxury goods for the aristocracy. Industry was better organized in the towns than in rural districts ; cloth-making was universally practised ; spinning was done by women all over the country and weaving by the men. The important centres of the cotton industry were Dacca, Lucknow, Ahmedabad, Nagpur and Madras ; the woollen industry was to be found mostly in Kashmir and the Punjab ; metal work was carried on chiefly in Benares, Nasik, Poona, Ahmedabad, Vizagapatam and Tanjore. There was excellent wood work done all over the country and the ship-building industry was also

relatively prosperous. Craftsmen were organized into hereditary guilds, which served as mutual help societies and regulated trade and production.

Decline of Industries.

These industries began to decline as early as the end of the eighteenth century, but the decline was most marked about the middle of the nineteenth century. Its causes were :—

(i) The extension of the British power which led to the disappearance of the patronage of the courts and nobility. The industries that owed their growth to such patronage were naturally ruined.

(ii) The influence and power of the guilds declined owing to changes in the tastes and outlook of the people.

(iii) The policy of the East India Company in its early stages was to encourage British industries at the cost of Indian traders ; prohibitive duties were levied on the export of Indian goods.

(iv) The most important influence, however, was the competition of machine-made goods, helped by the free trade policy of the Government. The Indian domestic and the cotton industries could not stand this foreign competition ; the old cotton, shipbuilding, iron, glass and paper industries of India were ruined. The artisans were rapidly thrown out of employment and had to take to field labour, or to seek employment in the factories.

Growth of Modern Industries.

Some of the artisans and craftsmen who stuck to their ancestral occupations adapted their trades in some measure to the changed conditions of production. The weaver to-day mostly uses mill-made yarn as well as the fly shuttle ; the tailor owns a sewing machine and the blacksmith uses iron ready-made into sheets. The chief difference between Indian and English conditions in this respect is that, whereas in England the handicrafts were destroyed by the

competition of machine industries within the country, operating Indian industries were ruined by foreign machine competition. The English craftsman or the artisan who lost his trade got better employment in the factories, although sometimes under very much worse conditions. In India the displaced artisan did not find a corresponding growth of industries and opportunities for employment, as the village organization and constitution still remains practically unaltered. The growth of industries has been very slow and what has been accomplished has been mostly due to foreign initiative.

"The raw form of industry was just established in the plantation industries such as those represented by the tea, coffee, indigo and jute estates, which were and have remained to this day in the hands of European planters." The example of these Europeans evoked some enthusiasm among Indians. Bombay took the lead and the cotton mill industry which was established there was financed chiefly by Indians; the jute industry in Bengal, however, is, or was until recently, mainly in the hands of Europeans.

The revolution in industry spread later to other industries such as cotton ginning and pressing, rice husking, grinding and oil mills. Progress at first was very slow and confined to a few places. Actually it was only towards the end of the last century that the Indian factory industry began to develop more or less all over the country, and especially in the first decade of the present century, when, under the influence of the enthusiasm created by the *Swadeshi* movement, many mineral, and some miscellaneous industries, came into prominence. It was also during these years that there was an extension in India of the use of small machines and generally a tendency to make a greatly increased use of mechanical

appliances everywhere. The war gave a temporary stimulus to India's manufactures, particularly to the cotton, jute, steel, iron and leather industries. The new policy of protection for industry adopted by the Government of India has also led to the encouragement and growth of these trades and also to the paper, sugar and match industries. Further stimulus has been given in some measure by the encouragement of technical and commercial education and by the assistance rendered by the Provincial Departments of Industries. Much more needs to be done in the educational field however, before India can be said to possess any adequate system of technical education.

To-day the total number of factories in India is about nine thousand and the number of persons employed in them is nearly one and a half million.

Important Large-scale Industries.

Cotton Mills. This is the most important factory industry of India. The first cotton mill in the country was established in 1818 and the first in Bombay was set up by some Parsis in 1851. Since then the industry has developed considerably but, owing to the lack of transport and credit facilities, there were only five cotton mills in India in 1877 and these were mainly confined to the island of Bombay. After then, however, there was a rapid construction of mills in Ahmedabad, Sholapur and Nagpur.* The industry received a good stimulus from the *Swadeshi* movement as well as from the Great War and there has been a recent tendency towards the production of finer cloths, instead of work being confined to the very rough materials, which were the only possible products of the coarse counts of yarn mostly used in the Indian mills until recently. Until 1905 China and Japan were the chief

*The number of cotton mills in 1939 was 389 and the number of spindles was 10,059,370 ; looms 202,464 and daily workers 4,41,949.

importers of the cotton manufactures exported from India but owing to the rapid and enormous growth of the industry in Japan, not only has that country ousted Indian cotton goods from the Chinese market, but it has also threatened the existence of the spinning industry in India itself. Even in plain, easily made piece-goods Japan is a serious rival. After repeated requests from the owners of the cotton mills of Bombay, the Government in 1927 removed the import duties on machinery and mill stores, and a tax of 5 per cent. was imposed on imported yarn. In 1930 a protective duty was levied on the import of cotton goods and an extra duty on non-British goods. The duty did not prove very effective against Japanese competition because of the fall of the Yen after Japan had abandoned the Gold Standard in December, 1931. There was a big out-cry in India for further protection against and even for restriction of—the imports of Japanese cloth. Consequently the Japanese and Indian governments entered into an agreement in 1933 known as Indo-Japanese Trade Agreement, the salient features of which were as follows :—

1. The duty on cotton piece goods imported into India was reduced from 75 per cent. to 50 per cent.

2. The imports of cotton piece goods from Japan were linked with the latter's purchases of Indian cotton.

- (a) Imports of Japanese goods were not to exceed 400 million yards.

- (b) Japan could send 325 million yards of cotton piece goods annually for one million bales of raw cotton purchased in India in a given year. If Japan purchased less Indian raw cotton in any year, it was to send two million yards of cloth less than the above mentioned quota for every ten thousand bales of raw cotton lower than a million bales. If Japan bought more than one million bales of raw cotton, then India was to import $2\frac{1}{2}$ million yards for every additional 10,000 bales purchased by Japan.

(c) Re-exported quantities were to be deducted from the imports on both sides.

In September 1935, a special Tariff Board was established to investigate and report on the question of protection to the Indian textile industry against imports from the United Kingdom. The report of the Board was under consideration of the Government of India and the Anglo-Indian Trade Agreement has been executed between India and the United Kingdom after two years of negotiation under which the United Kingdom is given certain rates of preference on piece goods which are linked with the purchase of fixed quantities of cotton by the United Kingdom.*

Jute Industry.

The first jute mill was erected in Serampur, Bengal, in 1855, and since then the industry has steadily progressed. In 1879, 21 mills were at work and the number had risen to over 100 in 1937-38. There were 105 mills with a paid up capital exceeding 20 crores of rupees. The number of looms and spindles in these mills was 66,705 and 1,337,958, respectively. For many years jute was manufactured only at Dundee in Scotland, but Calcutta has now a considerable share in the world's trade in this textile. The Great War gave a big stimulus to the industry, and Bengal now produces two-thirds of the total world supply of jute goods, the great bulk of which are in the form of gunny-bags, Hessian cloth and cordage. The industry seems to be more efficiently organized generally than the cotton industry.

The displacement of jute has been effected in two ways: (a) Increased use of grain elevators and (b) substitution of jute bags by bags made of paper, cotton, sisal, hemp and other fibres. The prospects of the jute

* For details see Chapter XVIII.

industry now depend to a greater extent than ever before on the maintenance of prices at an attractive level and sustained investigation as regards new markets and new uses, as well as the improvement of quality. The Indian Central Jute Committee has been recently constituted by the Government of India on lines somewhat similar to the India Cotton Committee.

Iron and Steel Industry.

This is one of the key industries in modern industrial organization and is of great national importance to any country, but especially to industrial countries. The rapidity of economic development of a country is gauged by the iron and steel consumption per capita of the population and by magnitude of its iron and steel industry. The Barakar Iron Works on the Jharia coal fields, were the first to be started by the Bengal Steel and Iron company in 1874. An important stage in the growth of the industry was reached with the establishment of the Tata Company at Sakchi in 1907, when pig-iron and steel were produced in India for the first time. The demand for steel and iron goods for the construction of railways in East Africa, Mesopotamia, Palestine and Salonika during the Great War, not only helped the enormous expansion of the Tata works, but also led to the establishment of several other companies. The production of pig-iron rose in India from 1,62,282 tons in 1914 to 1,576,000 tons in 1938-39. In spite of this increased production, India is still dependent upon foreign iron and steel to a very large extent. In 1924 a substantial measure of protection was granted for three years in the first instance to the steel industry on the recommendation of the Tariff Board in the form of higher import duties and for a short time bounties were also given on steel rails, railway wagons, and fish plates manufactured in India.

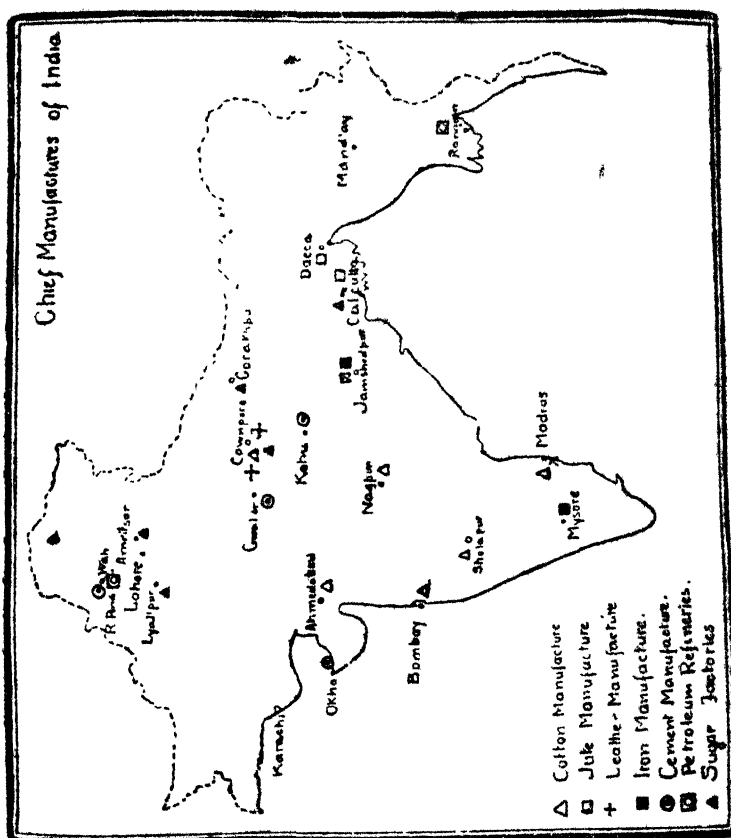
In 1927, 1932, 1934 further Acts were passed granting protection to various kinds of steel manufactures. As at present the protection will continue until 1941 when the whole position will be reviewed.

Tanning and Leather Industries.

India possesses a large supply of cow and buffalo-hides as well as goat and sheep-skins. A large quantity of raw hides were exported from India to Germany, United Kingdom and Italy and many raw skins are sent to the U. S. A., United Kingdom and Australia. The indigenous tanning industry of India has existed for a long time, but it was the military authorities who introduced modern methods into the country and established factories in order to obtain leather goods for the use of the army. A Government Harness and Saddlery Factory was established at Cawnpore in 1850 and the industry expanded considerably in the city as well as in Madras and Bombay. During the Great War the Indian Munitions Board specially interested itself in the effort to increase the output of leather boots and shoes with much success. Chrome-tanning has only made very slow progress in India owing to its processes being highly technical and to the high cost of the machinery required. A substantial measure of protection in the shape of an export duty on hides and skins was granted to this industry in 1919. The object in view was that the Indian tanning industry would receive a stimulus. But the experiment did not prove a success.

The exports began to fall off without any development in the industry being noticed. The protection was withdrawn later and duties lowered. Even the 5 per cent. revenue export duty which remained was abolished in 1934 in the case of raw hides, and in 1935 in the case of raw skins. Recently a development has been noticed, on account of

a great increase in India of the consumption of leather, particularly for the foot-wear, harnesses, etc.



Paper Industry.

The Indian paper-mill industry started with the foundation of the Bally mills on the Hooghly in 1870, and the Titaghar Paper Mills which were opened in 1882. Since then the industry has made steady progress; in 1938-39 1,184,000 cwts. of paper was produced in India; this is about four-fifths of the total demand of the country. The paper is mostly made from Sabai grass which is grown abundantly in Northern India, but some is also made from

bamboo pulp. The Indian demand for the best qualities of paper is not yet very extensive and since 1925 a protective duty of one anna per lb. has been levied on imported paper, which was to continue up to 31st March, 1939. It has been extended at the reduced rate of 9 pies per pound up to 31st March, 1942.

Match Industry.

Before 1921 there was no successful manufacture of matches in India on a commercial scale. In 1922, an import duty of Rs. 1-8-0 per gross was levied for purposes of revenue only. On the recommendation of Indian Tariff Board this duty was converted into a protective duty in 1928—under the Match Industry Protection Act, 1928—for an indefinite period. The industry is making very rapid progress as there is a large home market and labour is cheap. There are at present about 27 factories with a manufacturing capacity of 500 gross a day or over.

The worse feature of protection has been that the Swedish combine (a concern of Sweden) has established a large number of factories in India under foreign organization and with foreign capital. The fear is that it may not establish a monopoly.

The other industries which have made some progress during recent years are chemicals, glass, cement, silk, sugar, coal, and petroleum. Small flour-mills and rice-husking mills are also scattered all over the country. Sugar Industry has been discussed previously (see chapter IX *ante*).

Cottage Industries.

Cottage industries should not be understood to mean those in which no capital or machinery is used, for, as we have seen, there can be little or no production without capital; nor are they necessarily those in which no power is utilized. If water power or electricity is used for work in a house, it is still a cottage industry, which is not one in

which nothing but hand labour is used, nor it is necessarily work actually in a cottage.* (For, example, a weaver frequently works in the open air in the Punjab, especially when preparing his warp). Cottage industries are those which are not carried on in factories, or where there are no aggregations of a number of workers under employers, or where power machinery is used only on a small scale with no complex division of labour. Cottage industries are those carried on by or for artisans or handicraftsmen in their own homes, in villages or in towns, assisted, may be, by the members of their own families, or by a few hired labourers, or apprentices. The workers may be organized into guilds, or the industries may be carried on independently by artisans, as their sole occupation, or by others as subsidiary industries.

Most of Indian industry is still of the small scale type, although machine industries are developing in the country. The competition of foreign machine made goods has hit certain cottage industries very hard, but this does not mean that all of them must necessarily die out. It is true that it is not possible to maintain all the old industries intact, nor is it necessarily a good thing to endeavour to revive all the cottage industries that have suffered from machine competition. If it is realized that there is a sphere within which production on a small scale can be made profitable it will be possible to understand the true position of cottage industries; many of these still survive in spite of competition and some of them, as has just been mentioned, have adapted themselves to modern conditions by effecting the necessary improvements to enable them to compete in the

*But "cottage" has a very wide meaning when applied to Japanese industries; e. g., it may mean a place with thirty looms, driven by electricity.

market. Cottage industries flourish side by side with machine production in many European countries. In France for example, they are very successful, while in Switzerland one-third of the population is still engaged in cottage industries, chiefly watch and ribbon making. In Japan it has been demonstrated that cottage industries can flourish side by side with large-scale industries. It all depends on the kind of work done and the market for which they are catering.

The chief advantages of such industries are :—

(i) They serve as side-occupations to agriculture. Many cultivators in India remain idle for several months in a year, and they can supplement their income by such industries as cloth weaving, rope and net making if, and when, available.

(ii) A great deal of otherwise perishable labour can be utilized ; industry can be carried on in, or near, the homes of the people, and time and labour, which would otherwise be wasted, can be used profitably. Women and children can work and employ their time usefully. (Although there is a very serious danger here, especially for the children, if they are overworked.)

(iii) The evils of the factory system, (such as the loss of freedom for the worker, the aggregation of population in large smoky cities, and work under unhealthy conditions) may be avoided, but all too frequently they are not. The experience of western countries has been generally that the sanitary conditions of the factories have been an improvement on those of the older cottage industry.

Scope for Cottage Industries.

The scope for the revival and development of cottage industries in India is immense. Hand-spinning of cotton is now almost completely extinguished, in spite of the efforts to revive it, and it has not much economic importance. The hand weaving of cotton still provides subsistence to nearly a million people, even though the Indian

weaver has suffered very severely from foreign competition ; the industry cannot hold its own against machine industry unless it is confined to the production of goods, which are either too coarse, or too fine and artistic, to be produced profitably by a power loom. Carpet weaving by hand in homes can be made a very successful industry, but it is languishing because of the ignorance of the weavers and the lack of organization. The production of coarse, rough blankets and fine shawls seems to offer scope for a revival as does also the development of silk manufactures on a small scale, while among the other cottage industries that may flourish are : embroidery work, furniture, wood-work, metal and cutlery, gold and silver thread, pottery, soap-making, toys and bead manufacture.

Revival of Cottage Industries.

The Indian Industrial Commission examined the case for the revival of cottage industries and suggested the following measures :—

(i) Education of the craftsman—since the chief cause of the decay of cottage industries is the general ignorance of the workers. They are conservative, lack ambition and enterprise, and they should be given technical and industrial as well as general education. The Department of Industries in Bombay has opened six weaving schools in the Presidency for the benefit of the hand-loom weaver. The Punjab Department of Industries has started similar schools in some important towns.

(ii) Training of master workmen. In each industrial school, provision should be made for the instruction of a small number of students with better educational attainments and with a prospect of being able to command sufficient capital to start eventually in the trade themselves.

(iii) Financial assistance to cottage workers. Co-operative credit societies, (and in some cases the Directors of Industries), might grant small loans on easy terms to craftsmen. Tools and plant might be supplied on the hire

purchase system. To help in this respect an Industrial Loans Act has been passed in the Punjab.

(iv) A bolder policy of encouraging and patronizing artistic industries should be followed by the government.

(v) The provision of markets for the products of cottage industries. The chief weakness of the artisan is that he fails to get a satisfactory price for his goods, hence an effective marketing organization is necessary. The toy industry of Germany and the cottage industries of Japan owe some of their success to the existence of efficient market organizations. At present foreign markets are neglected by Indian Industrialists and even the home market is not properly nursed, the Arts and Crafts Depots of Lahore and Lucknow were introduced in order to remove this handicap to some extent.

(vi) Departments of Industries should assist the workmen to obtain cheap raw materials of good quality, encourage invention and the introduction of more efficient tools and implements, carry on experiments, and demonstrations for new patterns, etc.

The Government of India have in recent years exhibited very great interest in the promotion of cottage industries in India, especially the cotton handloom industry and the sericultural industry. In the Inter-provincial Industries Conference held in July, 1934, where schemes were discussed for the development of hand-loom industry, the Government of India announced that they had allotted five and a half lacs of rupees annually for the development of that industry. This grant would be divided among various provinces. The schemes to be financed are of a varied character, e. g., the training of weavers in improved methods of production, the establishment of sale depots and the weavers' co-operative societies for marketing of handloom products, and the introduction of new designs and improved handlooms and other appliances. It was also decided by the conference that there should be exhibitions of handloom machinery and fabrics.

Main Cottage Industries of the Punjab.

The following table gives the cottage industries and the important centres where they are carried on in the Punjab.—

Name of the Cottage Industries.	Stations.
1. Hand spinning of cotton and wool.	Cotton is spun almost everywhere. Wool : Jalalpur Jattan, Kulu, Panipat, Muzaffargarh, Hissar, Dera Baba Nanak, Haiderabad, Muktsar
2. Handloom weaving of cotton, woollen, silk, artificial silk and mixture.	Qila Sobha Singh, Khem Karan, Nurpur (Kangra), Nurpur, (Shahpur), Jalalpur Jattan, Multan (silk), Hoshiarpur, Rohtak, Panipat, Ludhiana, Jullundur, Lahore, Rewari, Amritsar, Kasur, Kalabagh.
3. Cotton durries.	Ambala, Ludhiana, Sialkot, Kamalia, Karnal.
4. Cotton and silk waistband.	Amritsar, Batala, Lahore.
5. Cotton newar.	Ambala, Gujrat, Jullundur city, Amritsar.
6. Embroidery.	Amritsar, Lahore, Rawalpindi, Multan, Ludhiana.
7. Gold and silver lace.	Amritsar, Lahore, Jullundur, Ludhiana.
8. Embroidery in gold and silver thread.	Amritsar, Lahore, Multan, Ludhiana.
9. Pile carpets.	Multan, Amritsar.
10. Woollen blankets.	Panipat, Kulu, Amritsar, Kheme Karan, Kahuta.
11. Camel-hair durries.	Haiderabad, Mankera.
12. Dyeing and printing.	Lahore, Kamalia, Amritsar, Multan, Karor Pacca.
13. Hosiery.	Ludhiana, Jullundur, Lahore, Sialkot, Amritsar, Rawalpindi.

Name of the Cottage Industries.

Stations.

Fibres.

1. Hemp, cotton strings^o ropes and munj ban. Hoshiarpur, Jullundur, Ludhiana and districts of Amritsar and Muzaffargarh.
2. Date palm basketry. Muzaffargarh, District., Kot Adu, Leiah.
3. Matting. Muzaffargarh, Lahore, Mianwali Districts.
4. Hand fans. Muzaffargarh, Bhera, Kala Bagh,

Metals.

1. Brass, copper, Bell making, Bronze, aluminium ware. Rewari, Jagadhari, Lahore, Gujranwala, Panipat, Bhiwani, Farrukhnagar, Pind Dadan Khan, Qila Sobha Singh, Daska, Jhang, Amritsar, Jullundur.
2. Iron safes. Gujranwala, Lahore.
3. Locks. Gujrat, Ropar, Rahon, (Ludhiana),
4. Spare parts of machinery. Lahore, Batala, Lyallpur, Jullundur.
5. Light engineering work. Lahore, Amritsar.
6. Transmithy. Lahore, Amritsar Rav'alpindi.
7. Steel trunks. Sialkot, Gujranwala, Amritsar, Lahore, Multan.
8. Cutlery, surgical veterinary instruments. Sialkot. Multan. Wazirabad, Bhera, Lahore.
9. Iron and iron sheet furniture. Gujrat, Gujranwala, Jullundur.
10. Sheet metal work, tube, buckets etc. Lahore, Amritsar. Sialkot, Jullundur, Gujranwala.
11. Agricultural implements. Batala, Lyallpur.
12. Swords. Bhera, Sialkot.

Wood.

1. Cabinet work. Lahore, Amritsar Gujrat, Multan, Kartarpur, Ludhiana,

Name of the Cottage Industries.	Stations
2 Turnery and lacquer work.	Hoshiarpur, Dera Ghazi Khan. Jampur, Jullundur.
3. Wood carving.	Chiniot, Hoshiarpur, Jullundur.
4. Carts, tongas and carriages.	Lahore, Amritsar, Jullundur. Rawalpindi, Multan.
5. Combs.	Amritsar.
6 Agricultural implements and trade tools.	Batala, Lyallpur.
7. Boat building	Lahore, Jhelum.
8. Framing and mounting of pictures.	Amritsar, Lahore, Rawalpindi, Multan.
9. Looms.	Ludhiana, Amritsar, Jalalpur Jattan. Multan Hoshiarpur.
10 Bamboo basketry.	Lahore and Kangra Districts.
11. Cane work.	Lahore
12. Sports goods.	Sialkot, Lahore, Ludhiana.
13. Reed stools.	Ludhiana, Sialkot, Kasur, Khem Karan.
Stone.	
1. Stone slates.	Dharamsala, Kangra, Kund (Gurgaon).
Glass.	
1. Bangles.	Fatehgarh, Churian.
2. Spangles.	Panipat.
Ceramics.	
1. Household pottery.	Multan, Gujrat, Jhang.
2 Glazed household pottery.	Multan, Gujrat, Jhang, Gujranwala.
3. Toys	Ropar, Lahore, Amritsar.
Products from Animal Kingdom.	
1. Hides and skins.	Amritsar, Multan, Lahore.
2. Bones.	Lahore, Amritsar, Rawalpindi.
3. Tanning.	Jullundur, Sialkot, Lahore Amritsar Multan
4. Leather manufactures	Kasur, Lahore, Sialkot.
5. Leather oil containers.	Lahore, Sialkot.
6. Painted leather vases, Multan.	

Name of the Cottage Industries	Stations.
7. Leather accessories for sports goods.	Sialkot.
8. Gut.	Sialkot.
9. Glue.	Rewari.
10. Honey.	Kangra.
11. Bee wax.	Kangra.
12. Horns and hoofs.	All over the Punjab.
13. Milk and dairy products.	Lahore, Murree, Rawalpindi, Ludhiana, Karnal.
14. Lac and shellac	Hoshairpur, Jullundur, Amritsar,
15. Mother of pearls articles.	Mailsian

Oils, Soaps, Perfumery and Toilet Goods.

1. Vegetable oils.	All over the Province.
2. Hair oils.	Lahore, Multan, Amritsar.
3. Soaps.	Multan, Sangodha, Amritsar, Lahore,
4. Perfumery.	Rohtak, Amritsar, Lahore.

Miscellaneous.

1. Musical instruments.	Lahore, Amritsar, Sialkot, Ludhiana.
2. Gold and silver smithy.	All over the Province
3. Smoking tobacco.	Lahore, Jullundur, Amritsar.
4. Snuff.	Campbellpur (Hazro).
5. Sugar manufacture.	Amritsar, Gurdaspur, Bhalwal, Sonapat, Abdullapur, Rahwali.
6. Jams, pickles.	Lahore, Amritsar, Jullundur, Simla.
7. Fruit juices.	Lahore, Amritsar, Simla.
8. Confectionery.	Lahore, Amritsar.
9. Biscuits.	Lahore, Amritsar, Rawalpindi, Sialkot.

Art.

1. Ivory Work,	Leiah, Amritsar.
2. Copper and brass inland cabinet work.	Hoshiarpur, Jullundur, Simla Chiniot.
3. Cheased lacquer.	Hoshiarpur, Jullundur.
4. Painted bows.	Multan.
5. Damascene.	Kotli Lohran.

6. Silver enamelled ware Multan.
and jewellery.

SUMMARY

The Industrial Revolution may, in one sense be said to have been accomplished in England between 1760 and 1860; on the other hand it may be said to be still going on with the great changes which have taken place since the Great War. Industry had been gradually re-organizing under the influence of widening of the market, growth of capital, the creation of a national outlook and national policy, but the application of a power-driven machinery completely revolutionized the industrial system. It brought sweeping and far reaching changes and completely changed the country.

After the middle of the nineteenth century, England was no longer an agricultural country; it became the leading industrial country of the world. Large towns grew up, the population increased considerably and congregated in large, smoky, industrial areas; social life was completely changed. Even agriculture was revolutionized and the small open fields were replaced by big, enclosed farms. Society became more clearly divided into capitalist and labouring classes and all-round there were signs of activity, unrest and progress. The national outlook was now to some extent superseded by an international point of view.

India is among the countries that have not yet accomplished such an industrial transformation. Although things are changing, the village is still the dominant feature of its economic life, as well as the unit of administration. It is still somewhat self-sufficient, though its economic isolation is being broken under the influence of Western civilization and the development of means of communication and transport. Other noticeable changes are:—

1. Commercialization of agriculture to some extent.
2. The nature of famines.
3. Money economy is taking the place of exchange by barter.
4. The village population is becoming more mobile.
5. Contract and competition instead of status and custom in economic life.
6. A national outlook is developing, even though Indian markets are now linked up with world markets.

Indian industry, which was formerly organized on the craft basis and was highly developed under the influence of the caste system, declined owing to the competition with machine made goods; but factory industries are growing in certain areas, and there is a considerable scope for the revival of cottage industries on artistic lines.

The growth of modern industries in India has been very slow and is mainly the result of foreign initiative and enterprise. The chief industries are cotton, jute, leather, paper and sugar.

Questions and Exercises

1. What is economic transition? It is said that periods of transition are generally 'periods of suffering.'—explain and discuss.
2. What is the difference between Industrial Transition and Industrial Revolution? Is there an industrial revolution taking place to-day in India?

3. Why was England the first country in the world to go through an industrial revolution ?

4. Compare the England of 1760 with that of 1850.

5. Compare the England of pre-Industrial Revolution days with the India of to-day.

6. Outline the chief inventions and improvements in machinery which took place in the Industrial Revolution.

7. Give a description of the Indian village as a unit of economic and political organization.

8. What changes are taking place in the life of the Indian villagers ? Are these good or bad ?

9. What do you understand by the phrase " Commercialization of agriculture ? " Is it a sign of economic progress ?

10. Has India gained by its contact with other countries of the world ?

11. What were the chief industries of India before the advent of the British ? Which of them still exist and which declined and why ? What prospects are there of revival ?

12. What industries have been granted protection in India and why ? What results have occurred from such protective legislation ?

13. In what other countries than India do cottage industries exist ? Why do they flourish ?

14. Is it possible to carry on hand-spinning side by side with machine spinning ?

15. What is the proper or most likely field for cottage industries in India ?

16. " The Indian weaver was the chief sufferer under the changed conditions after the Industrial Revolution in Lancashire." Discuss.

17. What scope is there for the employment of the weavers in India ?

18. Give a brief outline of the progress made by any of the following manufacturing industries in India in the last thirty or forty years : steel, cotton and paper. What has the attitude of Government of a country to do with the progress of its industries ? (P. U. 1933)

19. Give the characteristic features of the cottage industry. Name the principal cottage industries of the Punjab and point out the disadvantages from which they suffer. (P. U. 1936)

20. Will it be more beneficial for India to concentrate on the development of her cottage industries or on large scale manufacturing industries ? Give reasons for your answer, (P. U. 1935)

21. What are cottage industries ? Why in India are they preferred to large scale industries ? (P. U. 1939)

22. Name the administration departments that exist in the district to which you belong and bring out the way in which they function, (P. U. 1939)

23. Give an account of the method of the cultivation followed and the implements used by the cultivators in your part of the country. Would you suggest any improvement over them ? If so, give your suggestions and point out the result you expect from them ? (P. U. 1938)

24. How far is competition beneficial ? Account for the absence of perfect competition in the rural areas of the Punjab, (P. U. 1938)

CHAPTER XVI

THE LAWS OF PRODUCTION

Yield is Limited.

There would be no problem of the supply of the various factors of production if one acre of land could produce all the crop that might be required, or, if one engine could turn out an unlimited amount of finished products, or every man could work inexhaustibly without getting tired. But nothing that is limited can yield an unlimited amount of benefit or produce. A chair cannot usually accommodate more than one person at a time and, the supply of land, labour, capital and organization being limited, they will yield only a limited amount of benefit. There is an elastic limit to the utility that any 'good' will afford within a given time. Up to a point a man may feel pleasure in working more and more, but ultimately a limit is reached. So also a plot of land may produce more and more grain with extra effort, but sooner or later there will be an end to its yield. Any limited agent of production will provide only a limited quantity of goods; its productivity must begin to diminish after a certain point has been reached.

Expenses of Production.*

If we desire a certain quantity of any commodity we must first obtain the necessary supply of the factors of production. Suppose, for example, if a man wishes to grow

**The Real Cost of Production.* The phrase "real cost of production" is often distinguished from the money cost, or expenses in production. It consists of all the efforts and sacrifices which are made in the course of the production of an article, together with the wastage of human energy of any kind. "Expenses of production are the bare monetary costs of all the factors involved and the necessary fund for the depreciation of such factors.

1,000 maunds of wheat, he must obtain a certain quantity of land, a number of bullocks and implements, and hire labourers in order to obtain the desired produce. Probably he can get none of these things free and he will have to pay some or all of them before the wheat is grown. The money he spends for the production of the wheat is called his expense of production. The problem before a producer is to obtain the best results with the least cost; in this case, to reduce the expenses of production per maund of wheat as low as possible.

Varying Expenses.

But the expenses of production per unit of any commodity are never absolute; they vary with the quantity produced. If only one copy of a book is printed the expenses may be almost the same as for a thousand copies, and thus the expenses of production of a single copy are much higher than the expenses of production of each copy when a thousand copies are printed. As the number of books printed increases, the cost of production per book continually decreases, because then the specific costs of printing each copy (called the prime costs) are very small; they consist chiefly of paper, ink and labour in the press. The general, or supplementary costs, which consist of composition charges, proof-reading, payment to the author and compositors, rent, interest, wages of supervisory staff and depreciation charges, form a large proportion of the total costs. As additional output is obtained from the machinery employed, it works to greater economic advantage. The larger the number of books produced, the smaller will be the cost per copy. Each printing press, however, has a definitely limited capacity for its staff. Suppose, *e. g.*, a maximum of 100 books can be printed by the press on any day, working at its fullest capacity; then if it is desired to produce 200 books a day, the press will have to work double shifts. At the point where it is necessary to

before there is any production. Take, for example, the expenses incurred in making a railway. Land must be acquired, miles of lines laid down, railway stations built, engines and waggons must be made and a permanent staff engaged; these things will not be done if the traffic to be carried is likely to be inconsiderable. The large amounts of capital necessary for the building of hydro-electric plant will not be sunk if the expected return is not very large. Machinery makes it necessary to produce on a large scale, just as large scale production is impossible without machinery.

Advantages of Large-Scale Industries.

Large-scale production is being increasingly adopted in many industries as a big business has several advantages over a small concern such as:—

(i) Economies and benefits of division of labour can be more easily secured.

(ii) Raw materials can be bought cheaper because of the large quantities purchased. When big amounts of the manufactured articles are sold, many expenses, such as advertising and transport charges, are more easily borne, as they can be distributed over a large output and are relatively less on each unit.

(iii) Less waste of material generally. A single butcher may have to throw away as waste skin, hair and hoofs of an animal; but in a large concern all these can be utilized as by-products. It has been said that not a hair is wasted in the food-packing factories of Chicago. "This may be an exaggeration, but it is true that from the horns and hoofs, various grades of glues, buttons and hairpins are made; the albumin in the blood is used to make an insoluble printer's ink; and from the dried blood, bones, and the ground waste of hoof and horn scraps, a rich fertiliser is prepared."

(iv) Machinery and skill can be used to better advantage.

(v) More expense can be incurred on advertising, on experiment and research as the cost is less per unit. These should bring in a greater return later.

(vi) The advantages of increasing returns can be more easily obtained.

(vii) The fluctuations in the market are less likely to cause trouble.

Limits of Large-Scale Production.

Though the economies of large-scale production enable costs to be reduced, there are limits to their use.

(a) There cannot be large-scale production unless there is a big demand for the commodities produced, as heavy risks have to be taken and if the market conditions change, or if the enterprise turns out a failure, there is considerable loss.

(b) In a big business there is often little direct interest in the business and not much personal contact between the employer and the employed.

(c) There is a possible shirking of duty on the part of the labourers when the supervision is not keen, and sufficient attention may not be paid to the work, which in that case, cannot be as fine and artistic as that of an individual craftsman, who is really interested in the quality, as well as the quantity of the product.

In most types of industrial enterprise the advantages are on the side of the larger concern, but this does not imply that a business can grow indefinitely. Only a little extra land is required to build a large factory; machinery and labourers can be multiplied to advantage, but the limit to the growth of a business arises from the difficulties of management; no one man can control too big an organization; there is a limit beyond which it is un-economical to enlarge the business unit, as then production will be carried on at a loss. Ultimately the tendency to diminishing returns prevails and the business cannot be

expanded further ; the human factor sets a limit to the expansion of a business.

Large-Scale Production in Agriculture.

Next we may take an agricultural business, say a farmer starting with a small holding of five acres, scattered over a large area in ten small strips of half an acre each. He has a wooden plough and a pair of oxen and obtains a total output of, say, 100 maunds of grain (20 maunds per acre) in a single harvest. If there is a greater demand for the produce and he wishes to increase his out-turn he can do so, either by cultivating more land, or working the same holding more intensively, making it yield more by the application of additional labour and capital. If he adopts the first method it becomes increasingly difficult for him to take his plough and oxen over the larger area ; one pair of oxen becomes insufficient to plough the additional land ; the limit of his own capacity to work over the larger area is soon reached. Diminishing Returns set in and every addition of land, while adding to the total produce, gives a lower yield per acre. The margin of extensive cultivation is reached when the last piece of land added does not yield more than its cost.

In the second case it may be that, when the farmer substitutes a better plough, which digs a deeper furrow, he can increase his produce by more than he spends on the plough but as the land is limited in quantity, he cannot go on employing more machinery and labour on it ; soon a limit to the intensive cultivation will be reached.

This is distinguishable from the previous case in two respects :—

(i) The quantity of land is limited and increase in produce depends largely upon the quantity of land.

(ii) If more land is used the limit to the owner's power of control is soon reached, as one person cannot easily exercise supervision over vast tracts of land.

For these reasons the tendency to Diminishing Returns is much more noticeable in agriculture than in manufactures ; it shows itself much earlier in the development of the size of the business unit.

Large-Scale Farming.

Although Diminishing Returns in agriculture ensue at an early stage, large scale farming has been introduced with great advantage in some countries, *e. g.*, the U. S. A., Canada and Russia. Large farms permit of a proper rotation of crops, good drainage and irrigation schemes, the use of expensive manures and expert management, good fencing and roads, suitable buildings, improved implements and machinery. A smaller farmer cannot employ a threshing or reaping machine economically unless he uses it in co-operation with other cultivators, but he has the following advantages over the large farmer.

Advantages of Small Farming.

1. Greater care and attention can be devoted to crops such as fruits, vegetables and flowers which require more personal attention.

2. The small farmer generally takes more interest in each branch of the work and this gives him a greater sense of independence and responsibility.

3. The land can give a greater return per acre. Where the small scale farmer predominates *e. g.*, in France, Belgium and Southern Europe, the growing of valuable crops, which require special skill and personal attention, is practised. For staple crops such as wheat, cotton and rice, large-scale farming is more suitable.

As mentioned previously, farms in India are usually extremely small, and holdings are scattered ; the size of an average farm scarcely exceeds two acres and the tendency is towards increasing sub-division and fragmentation in very many places. In England the holdings are from 50 to 300

acres mostly, but it should be remembered that there is no standard size of an economic holding ; it all depends on the ability of the farmer to cultivate the holding. It has been estimated that to keep an average agricultural family at a satisfactory standard of life, the size of a holding should be about 30 acres, but this will vary very much in different places.

FARMING IN THE PUNJAB

Classification of Villages.

The villages of the Punjab may be divided into two main groups. Firstly, there are the Old Abadi villages of the central districts where the population is very congested and the holdings are extremely small and scattered. The fields are all irregular strips of land called "Kishtwar" in Revenue terminology. Secondly there are New Abadi villages and *chaks* in the canal colonies. In areas newly brought under irrigation on the Lower Chanab and Lower Jehlum Canals, the land has been divided into squares (200×200 Karams) about 28 acres, and subdivided into 25 small squares called *Killas* each having an area of 1·1 acres. On the Lower Bari Doab Canal there are rectangles of 25 acres each. A village comprises 50 to 100 such Squares or Rectangles and is called a "Chak".

Open Field System.

In the Punjab there is almost everywhere the open field system *i. e.*, no regular enclosures or fences for individual holdings. As they are mostly small and scattered, fencing is not possible, and there is lot of wastage of crops by raiding cattle.

In villages near the towns where the population is very much congested, intensive farming is carried on and two to three crops are raised on a field each year. In such

cases the fertility of the soil is maintained by the addition of manures. In extensive farming however one or two crops may be raised in a year : such lands are called "Yakfasli" or "*Do fasli*" according as one or two crops are raised in a year.

Rotation of Crops.

Different crops are grown in succession *i. e.*, a regular system of rotation is followed. The land is also left vacant for a certain period to allow it to recover its vitality. This is called keeping the land "fallow".

Various systems of rotation are followed in different districts ; generally in Canal Colony villages Wheat - Toria - Cotton or Wheat—Fallow—Cotton etc. The general rotation in Barani areas is Wheat—Mash—Fallow—Fallow, or Wheat--Fallow—Wheat etc.

Different types of irrigation.

The Punjab lands are divided into the following four main classes according to the modes of irrigation and the systems of farming vary according to the means of irrigation :—

(i) *Nehri or Canal irrigated.* A network of canals has been spread in the Punjab and now canal water has been taken even to the remotest corners. Vast strips of barren land have been brought under irrigation and cultivation. Villages of the Lower Chenab and Lower Jehlum Canal, which were all unculturable waste only about forty years ago, are now the richest in the Punjab. A new scheme of irrigation *viz.*, the Havelian Project has been brought into operation and construction of Thal Project is in hand.

(ii) *Chahi or Well-irrigated.* In the districts near Jullundur, Ferozepur and Hoshiarpur irrigation is carried on generally from wells. Water is mostly drawn from the

wells by means of a "*Rehat*", or in some cases by a *Dhingri*. In the Districts of Rohtak and Hissar where the subsoil water is very deep, water is drawn by means of a *Charsa*.

Tube wells are not common in the Punjab because of the small holdings, but some enterprising people in Jullundur and Ferozepur have installed them. Well irrigation though dearest, is the most securest type; by canal irrigation or heavy rains, sometimes the subsoil water level rises; but if well irrigation is also carried it helps to keep the soil safe from being "water-logged."

(iii) *Barani* or *rain-fed*. *Barani* cultivation is done in the Districts of Gurdaspur, Sialkote, and Hoshiarpur where the rainfall is plentiful.

(iv) *Sailab* In villages along the banks of the rivers Sailab cultivation is carried on the lands which receive and store their requisite moisture during the floods.

By the activities of the Agricultural Department and various rural reconstruction schemes, farming in canal colony villages especially those of the Lower Chenab and Lower Jhelum Canal and other important centres, has improved considerably; but in still remote villages the old systems of farming continue.

Crops.

The farming year in the Punjab is sub-divided into two main crops—Kharif or "Sawani" and Rabi or "Hari." The former commences from the beginning of April when crops such as Sugarcane, Cotton, Rice, Maize, Bajra and Juar are sown. The Rabi commences from the beginning of October with the sowing of crops such as Wheat, Barley, Gram, Oats, Seinji and Shaftal.

There are also two additional intervening crops—Zaid Kharif and Zaid Rabi. The former includes Toria

and Sag and the latter Tobacco, Onions, melons, water melons etc.

Thus a farmer in the Punjab has a regular programme throughout the year. Preparatory tillage, manuring, watering or preserving moisture, sowing, hoeing and interculture, harvesting, thrashing, winnowing, collection of the produce and finally its marketing are the main operations which a farmer has to perform

The Punjab having generally a fertile alluvial soil has not to work very hard to raise a crop but enlightened and hard working Zamindars are now realizing that full attention and care is necessary for each operation to produce a bountiful crop.

Stages and Tools of Husbandry.

Preparatory Tillage :—Farming in old and backward villages is mostly indigenous ; the holdings being small, the farmer cannot afford to buy improved scientific implements of cultivation. Machinery does not pay much in the Punjab as manual labour is fairly cheap and in the backward villages the farmer is seen tilling soil with a Desi or Munnah Plough. This with its triangular shape makes a V shaped furrow and thereby leaves greater portion of the subsoil unploughed. Some zamindars have realized the benefits of the improved furrow turning ploughs which with their wedge shaped shares thoroughly plough and invert the subsoil. The Meston plough is mostly used in lighter soils and the Hindustan and Rajah Ploughs in heavier soils.

After ploughing, "Suhaga" is run to break the clods, level up the soil and preserve moisture. In canal irrigated villages the land is levelled by means of a "Karah" or a leveller and the "Wats" or "ridges" are made by means of a "Jandra",

Manuring:—Manuring is not extensively done in the Punjab: farm yard manure or the "Village Sweepings" are put in the fields near the village. The cattle dung is often used for fuel purposes although it contains the most important manure constituents. In some places the village sweepings are stored in open heaps and this important food constituents are washed away by rains. In some villages manure pits are dug for preservation of farm yard manure. Commercial fertilizers such as the nitrate of soda, potash etc. are very rarely used.

Sowing:—After finishing the preparatory tillage and preparing the seed-bed, the farmer broadcasts the seed *i.e.* sows by the "Chhatta system". In some cases the "Kera system", *i.e.* seed dropped in a furrow drawn is adopted and then the seed is covered by running the Sohaga. Some zamindars attach a Nali or Tube to the plough and pour the seed through a cup. This is called "Poura system". Improved types of "Seed Drills" where the seed is uniformly distributed in the field in regular rows are also in use. The "Johnston Drill" is mostly used for sowing wheat; cotton is sown in lines by means of drills to which Morkers are attached to regulate the distance between the rows which vary from $2\frac{1}{2}$ ft. to 5 ft.

As a result of the efforts of the Agricultural Department the zamindars are realizing the necessity of sowing improved and selected varieties of seed, but in backward villages the farmer still persists in growing indigenous varieties. In advanced villages the zamindars purchase the selected varieties of seed from the Agricultural Department and some also prepare their own seed from such varieties.

Interculture : A sluggish and idle zamindar pays little attention to interculture, but a wise zamindar knows full well that hoeing and removing of unnecessary weeds are essential for getting a good crop. In intensive farming, hoeing is done by means of a hand hoe, or "Khurpa" but this is not possible on an extensive scale. For wheat, the crest is broken and weeds removed by means of a 'Bar Harrow.' For Cotton hoeing is done by country plough or horse hoe. For sugarcane "Anni Godi" (Blind hoeing) is done by means of a small spade specially made for the purpose.

Harvesting :—The Punjab farmer has his busiest time during the harvesting of wheat, and his wife during the picking of cotton. Cutting is mostly done by a hand 'scythe' or Drati; mechanical reapers are also employed on some big estates driven by bullocks, as well as tractors. But as a general rule reapers are not very successful in the Punjab as the fields are too small and manual labour is comparatively cheap.

Thrashing and Winnowing of Wheat—After harvesting the wheat, it is threshed by means of a "Phallah" drawn by bullocks. Then the seed is separated from the straw by means of a "Chbhaj" with the help of wind; this is called 'Winnowing' or "Urai". thrashing and winnowing machines are not in use in the Punjab farm except on very big owing to their excessive cost.

Livestock.

The Punjab is predominantly an agricultural province of small holders who must have bullocks to work the ploughs and to cart the produce of the field; at the same time milk and milk products, particularly *lassi* (butter-milk),

are dear to the heart of the cultivator,† the consumption of meat being very limited in the rural tracts. Consequently the chief necessity for the Punjab is to have strong plough-oxen and good milkers, and the development of these two qualities, draught and milk, are of supreme importance.‡

There are five breeds of the Punjab cattle with some repute. These are: (1) the Haryana breed found in the Districts of Hissar, Rohtak, Gurgaon, Karnal and Ambala; (2) the Malwa breed of the Ferozepore and Ludhiana Districts (this breed is very much like the Haryana); (3) the

† The Punjab has the highest per head production and consumption of milk in India. The following table shows some comparative figures (source: Dr. Wright's report, *op. cit.* pages 155-6):

				PER HEAD Production Ozs.	PER DAY. Consumption Ozs.
<i>Provinces—</i>					
Punjab	...	...		18'3	9'9
Bihar and Orissa	...	...		6'4	3'2
C. P.	...	...		6'1	0'1
U. P.	...	...		4'7	5'0
<i>Countries—</i>					
New Zealand	...	...		244	56
Denmark	..	..		148	40
Sweden	..	...		69	61
U. S. A.	..	...		37	35
Great Britain	...	..		14	39
India	...	..		8	7

‡ In order to get an idea of the average number of cattle kept in a Punjab village homestead, 500 families of cultivators were examined from some data available. Twenty families were selected at random in one village each in 25 districts; only families with livestock were taken. The following is a bare summary:—

		Number	Average per family,
Families	...	500	...
<i>Milch cattle—</i>			
Cows	...	626	1'25
She-buffaloes	...	671	1'34
Plough oxen	...	1,362	2'72
Sheep and goats	...	1,637	2'07

Of the above 500 families 189 had no cow and 176 no she-buffaloe (4a of these families had neither a cow nor a she-buffaloe: 25 families had no plough oxen, but six of them were using male buffaloes or camels. The number of families with sheep and goats was 59, mostly in the south-west Punjab.

India had 221 million animals in 1935, out of which about 24 million were in the Punjab.

Dhanni breed found in the tract comprising the Rawalpindi, Jhelum, Mianwali, Attock and Shahpur Districts; (4) the Montgomery or Sahiwal breed in the Montgomery and Multan Districts; and (5) the Dajal of the Dera Ghazi Khan and Mianwali Districts. Speaking generally, the Haryana and Dhanni breeds produce good working bullocks and the Sahiwal good milch animals. The policy of the Government is to encourage systematic breeding where these breeds have retained more or less their individual characteristic features, the object being "to demonstrate to the breeder through his pocket that it is worth his while to produce superior stock and at the same time to supply him with facilities for doing so."

One of the chief reasons for the low quality of the ordinary milch cattle in the Punjab has been promiscuous breeding in the past. This particularly applies to the areas away from cattle breeding tracts where, to fulfil his immediate needs, the farmer got his animals covered by any bull that was available. In the eastern parts of the Province there were also what are called Brahmani bulls, animals let loose as an act of piety with no regard to their quality; rather the reverse in fact, for low quality bulls are cheaper to get. With the general development in the country and a fast increasing population, there also began a drain of the best milch animals from the villages to provide milk in towns, leaving only inferior cattle to carry on the breed. In the Canal Colonies, however, there were found pure strains as there was sufficient land for carrying on cultivation, and cattle farming was an important occupation of the people. Professional cattle-graziers roamed over these vast arid tracts; and it was this class of people who knew the technique of cattle-breeding; even to-day the *janglis*, the original inhabitants of the Canal Colonies, have better cattle than the later arrivals. With the exten-

sion of cultivation consequent on the opening of the canals, and the rise in population owing to immigration, grazing land decreased. The result was that the professional graziers had to seek "pastures new" or give up their work in favour of some other occupation, such as agriculture. The colonists brought their own cattle with them and these mixed with the local animals, so that the purity of strain, in a large measure, was lost.

Cattle-breeding is a slow and expensive process; the particular strain required, such as for draught purposes or milking quality, has to be developed by judicious selection and much discarding of animals not coming up to the standard.

From what has been said above it follows that one of the pressing needs in cattle development is the production of quality bulls, for in cattle genetics the influence of the sire on the progeny is paramount. In this respect the work of the Government falls into four groups: (1) the Hissar Cattle Farm, (2) grantee cattle farms, (3) cattle-breeding in special tracts, and (4) general breeding and veterinary work. The purpose of all these is to make available bulls for service generally and at the same time develop the individual qualities in the different breeds. In this respect the Hissar Farm deserves special mention as it is the largest of its kind in India and is doing yeoman service to the Province: it may be noted that each year the Punjab supplies more stud bulls to the countryside than all the other provinces in India put together*.

The Government Cattle Farm at Hissar was originally established as a camel-breeding station, but since 1850 it has been concentrating on cattle-breeding. It is "primarily designed for the maintenance of a pedigree herd of Haryana cattle with a view to the issue of high class stud bulls to

*In 1935-6 out of 10,006 approved bulls at stud in India, 5,035 were in the Punjab. (Dr Wright, *op. cit.*, page 168).

the various districts of the province."† The farm is organised on the lines of a cattle ranch and the main herd depends to a large extent on natural grazing; the bulls issued by it are sold to the District Boards for use in villages at a special price of about Rs. 100 per animal. In 1935-6, 616 stud bulls were issued‡ and the price realised was Rs. 46,000 while the production cost came to Rs. 2,44,485 so that under this head alone the Punjab Government was subsidising cattle-breeding to the extent of Rs. 1,98,485. In addition to the Hariana cattle attention is also being devoted in the Farm to the improvement of sheep, goats, donkeys and horses. Two breeds of sheep are being developed: (1) the Hissar Dale, which is in much demand in the mountainous Kangra District where sheep farming is practised, and (2) the Bikaner desert breed; for goats the breed being developed is Jamnasari (beetul), "the popular milch goat of the Punjab and the North-West Frontier Province."§

There are six cattle grantee farms in the Lower Bari Doab Canal Colony: four in the Montgomery District and two in the Multan District. In 1935-6 the total area of these farms was 16,230 acres (including 485 acres under a dairy farm grant), and the required strength of the herd was 1,850 cows and 31 bulls of both the Hissar and Sahiwal strains. These grants have not been an unqualified success; in the words of the Veterinary Department report: "This is not particularly the fault of the grantees, but of the system. Much more can be done by propaganda and introduction of sound stock among local small breeders than by setting up large farms, whose owners are troubled with heavy over-head charges and are more likely to devote attention to profits from agriculture than to the

†Civil Veterinary Department report for 1935-6, page 1 of the Government's review.

‡In all the other Indian provinces this year only 378 stud bulls were issued

§Civil Veterinary Department report for 1935-6, page 7.

cattle farming, which those profits are intended by Government to finance."* This criticism is significant and as the Cattle Census Report of 1923 says : "Cattle-breeding is not a commercial proposition actually, and still less when compared with the large profits to be obtained from agriculture in the strict sense of the word." As already mentioned cattle-breeding is a slow process and with the present poor quality of cattle generally it is much more lucrative to sow commercial crops than to rear cattle.†

The locale of the various Punjab breeds has already been mentioned. In these tracts the breeds have maintained more or less their distinct characteristics thanks to the indigenous professional cattle-tenders. The Government here subsidises such men in producing stud bulls which are bought from them and sent to other parts. Two tracts, Haryana and Dhanni, are receiving special attention, and in 1935-6 the expenditure here came to Rs. 64,782, out of which Rs. 42,600 was met by District Boards.

The general breeding and veterinary work embraces various other activities of the Civil Veterinary Department. With the growing confidence and sympathy between the officers of the Department and the farmer, preventive inoculations and vaccinations are making steady headway. Superstitious observances are, however, still in evidence and the practice of obtaining charms (from sadhus and other holy men), which are slung across a lane and under which the cattle have to pass, has not disappeared. The common cattle diseases in the Punjab are rinderpest, foot and mouth disease, and hæmorrhagic-septicæmia. Treatment for these requires segregation of the infected cattle and this is where the co-operation of the public is most necessary. In foreign countries drastic measures are taken for the prevention of contagious diseases; thus the following Press report says : "A total of 18,300 animals have had to be

slaughtered (in England) this year to the end of November in consequence of an outbreak of foot and mouth disease... in November alone compensation to the amount of £85,316 (Rs.11,37,547) became payable in respect of cattle slaughtered on account of the disease."* One wonders what would happen if this were done in India! As Sir Mulcolm Darling says: "The simple principle imposed by religion that an animal once born must be allowed to live on irrespective of its utility to man outweighs all economic considerations."† This reluctance to do away with useless cattle was also commented on by a foreign tourist in India in the following words: India cannot expect to have Miss Mayo's book banned so long as many of the customs she is describing are going on. Everyone will respect the high traditions of India's religions, but personally I don't believe that the cause of God is served by having hundreds of ill-fed cattle in the streets of Calcutta and other towns, living mostly on the street dirt."‡

After breeding, the next most important cattle problem, and one that is now receiving greater attention is that of increasing the milk yield. This introduces the whole question of animal nutrition, for the Indian cattle are not only under-fed but at the same time badly fed. Put briefly the principle is that, given the milking capacity in an animal; the milk yield can be greatly increased by careful and correct feeding; the reverse however does not hold true and no amount of judicious feeding will increase the supply appreciably if the capacity is missing in the animal. At the Punjab Agricultural College Dairy at Lyallpur the average annual milk yield per cow has been increased by scientific feeding from 4,259 lbs. in 1930-1 to 6,037 lbs. in 1934-5. This has not been attained at a large cost; as a matter of fact the cost has decreased from 98.67 annas per 100 lbs. of milk pro-

duced in the first year to 69.52 annas in the second.* A large part of the increase in supply was due to feeding the herd more largely on green fodders.

The crux of the cattle problem lies in getting better plough-cattle and improving the milk supply. The Civil Veterinary Department annual report for 1935-36 summarises the situation very well in the following words: "The magnitude of the problem can be visualised by taking into consideration the needs of the population which is increasing at the rate of about 3 lakhs a year and the fodder required for the stock. We need ploughing bullocks for 31,850,814 acres under cultivation. At present the province carries a population of 2 crores, 52 lakhs. It has 11 cows to 100 of population, giving 50 lbs. of milk *per capita* in a year, and it has 12 buffaloes for 100 of population, adding another 90 lbs to the milk supply.* The approximate number of persons per milch animal is 5. Taking into consideration the low milk yield, it is clear that the supply of milk is inadequate and the village carries stock which gives little or no return and cannot be properly fed."*

Social Aspect of the Law of Diminishing Returns.

The apparent contrast between manufactures and agriculture becomes even more striking if we examine the question from a social point of view. If new land could always be obtained for a growing population there would be no difficulty. In countries such as the U. S. A., Canada, and Australia, the early colonists had plenty of land available, but in almost all the older countries, such as England and India, the limit to the supply has been reached; most of the available land is occupied. In some countries, *e. g.* Japan, even the limit of intensive

**Ibid* page 5 of the Government's review.

cultivation has been almost reached, and thus additional production from land will be under increasing costs.

In India there is still a vast field for improvement. Although the land has been cultivated for several centuries, only the surface has been touched ; methods of agriculture are primitive ; old implements are still in general use ; threshing is carried on, either by hand, or by oxen ; broadcast sowing is generally practised ; seed selection is little known. The productivity of land is still very low and there is thus great scope for the expansion of intensive cultivation. The big irrigation system of the Punjab is illustrative of what canals can do in turning wastes into useful and productive land. The tendency to diminishing returns in agriculture can be checked in India by :—

(i) Intensive cultivation, proper rotation and use of scientific manures.

(ii) Improvement in the arts of agriculture.

(iii) Increased irrigation facilities.

(iv) Improvements in transport.

(v) Proper drainage of areas which are water-logged and marshy.

(vi) More education and training for the cultivator in scientific agriculture.

Agriculture is, and is bound to remain for a long time, the most important industry in India. The prosperity of most of the people depends mainly on agricultural production as does also the foreign trade, the industries and finances of the country. The improvement of agriculture and of the agriculturist has for many years past attracted the attention of the Government of India. To increase the well-being of the people, crop production must be stimulated to give an increased yield or a better quality than at present.

Government Help to Agriculture •

The great famine in Bengal in 1866 first drew the attention of the Government of India to the problem of agriculture and a separate department for enquiry and improvement, as well as for famine relief was seriously considered by Lord Mayo's Government in 1869. No regular department could be established then and no real progress was made until in 1889 the Secretary of State sent Dr. Voelcker of the Royal Agricultural Society to advise the Government as to the best way to apply the teaching of agricultural chemistry to Indian agriculture. He held the view that the Indian system was not backward but its inferiority was due to a lack of proper facilities, which could be improved. He recommended the systematic prosecution of agricultural inquiry, together with the spread of general and agricultural education, he laid down in considerable detail the lines on which improvement was possible. In pursuance of the recommendations, an agricultural chemist and an assistant were appointed to carry on research work and to teach those branches of their subject connected with forests and agriculture. An Inspector-General of Agriculture was appointed in 1900 to advise the Government, and later an Imperial Mycologist and an Economist were added. Rapid developments followed. A number of scientific workers were recruited, but such workers are always handicapped if they have not adequate laboratories; further, their discoveries are of little practical value unless they can be demonstrated on a farm. Consequently a large Government estate at Pusa, in the Darbhanga District of Bihar, was taken for the purposes of an agricultural college, research institution, and experimental farm. It was intended that the farm should serve as a model for similar institutions in the provinces. A donation of Rs. 30,000 was made to the Viceroy by an American philanthropist, Sir Henry Phipps, and Lord Curzon decided to devote this gift to the equipment of the new

research institute, which is perhaps the biggest of its kind in Asia; it is fully equipped with laboratories, museums, herbaria and lecture rooms. In 1905-6 it was announced that a sum of 20 lakhs (subsequently increased) annually, would be available for the improvement of agriculture, and the development of provincial Departments of Agriculture was taken in hand seriously.

In each province agricultural and veterinary work are now under the control of a Director of Agriculture. Where there are agricultural colleges, the scientific officers and their laboratories are stationed at the colleges and to each of which there is attached a farm for training the students in practical work, the demonstration of collections of the cultivated plants of the locality and for experiments. Here also are the areas where the economic botanist carries out his work of crop selection and improvement. When sufficient progress has been made by the chemist and botanist in the laboratory they can test their results on the college farm. Various provinces have now engaged agricultural engineers to adapt the implements of the West to Indian conditions. Deputy Directors, each in charge of a circle, are posted at different stations and, aided by a staff of assistants, they control the experimental demonstration and seed farms. Agriculture was a Transferred Subject of administration before Provincial autonomy was introduced and is now a Provincial subject. The Provincial Departments of Agriculture are a very important branch of government work, concerned as they are with the improvement of something on which so much of the welfare of the great masses of the people depends. The functions of the Departments are, therefore :—

- (i) Education.
- (ii) Research and Investigation.
- (iii) Demonstration and Propaganda.

Perhaps we may examine the nature of this work in greater detail.

The self-contained Indian village used to grow its own food crops and fibre for clothing; the cultivator ground the grain into flour and in his house the fibre was woven into cloth. The food crop which he grew was the grain he ate himself; the village taste set the standard and if the quality deteriorated there were no means of improving it. The villagers were content with little and were practically independent of the outside world whose requirements, before the opening of the railway, hardly effected the value of Indian crops. With the breaking of the self-sufficiency of the village, the discrimination of the market became a concern of every little hamlet. The demands of the outside world have set a standard of the crops required and their prices, hence the problem of the improvement of the qualities has come to the forefront.

Innumerable varieties and samples are found and tested in order to determine by selection which are the most suitable for the local conditions. This is done by an examination of the plants growing in the field. What appear to be the best are selected and grown side by side, their characters and out-turn are studied and, when the superiority of one or two types is demonstrated and proved, the seed is multiplied and distributed to the cultivators. This is known as the improvement of crops by selection.

Another method is by cross breeding, or hybridization and acclimatization. Indian varieties of tobacco are not good for cigarettes and to meet the demand for the market it is necessary to obtain light burning and light-coloured tobacco. If those qualities could be given to the Indian product the gain to the country would be immense, but it can only be done by hybridization. The question of the supply of pure seed is of the greatest importance in Indian agriculture and then to organize an agency to distribute the seed.

Improvements have been made in the methods of

agriculture, manures and implements ; e. g., much success has been obtained by the introduction of grain-winnowers and cane crushing machinery. The introduction of reaping machines and heavy ploughs is difficult in a country of small farms and the question of manures is also troublesome in India. Farmyard manure is there, but not in sufficient quantity, and much is used as fuel. There is also the religious prejudice against the use of night-soil and bones as manure, while artificial manures are expensive, hence the urgency of finding a method for the manufacture of cheap artificial manures in India.

The problem of bringing the conclusions of science to the aid of the ordinary cultivator is complex. There are the limitations of his conservatism and ignorance, his small holding and his restricted means ; but the provincial Departments of Agriculture have done a great deal to show the way towards a solution of this difficult problem. They have also done valuable work in connection with the conservation of soil moisture, reclamation of saline lands, the movements of nitrates in the soil, the storage of farmyard manure and the control of insect pests. The departmental agricultural farms have evolved new types of wheat and improved the qualities of sugarcane, cotton and tobacco and work is in progress on about 30 major crops.

Veterinary hospital exists in all districts for treatment of cattle diseases and good work is being done in improving the quality and breeds of Indian cattle. The Imperial Department of Agriculture has two cattle breeding farms—one at Pusa and the other at Karnal. Agricultural exhibitions and cattle fairs are organized to demonstrate to people the advantages of improvements. Grain elevators have been constructed for the storing and later export of standard qualities of grain, while co-operative commission shops have been established for marketing the produce. Canal irrigation schemes have received much

attention; co-operative credit societies and experimental farms have been organized. There are now in India 22 agricultural institutions and laboratories concerned with the improvement of crop production, about 300 experimental and demonstrative farms, about 83 plant-breeding stations, a teaching and research staff of about 800 officers and about 2000 officials engaged in the introduction of the successful results of research into general agricultural practice.

In the Punjab an Agricultural College was opened in 1909 at Lyallpur. Its main object is to give such a training in scientific organization as will render the men educated there competent to further the progress of agriculture in the province on modern lines. The college serves as a centre of agricultural research and has well-equipped chemical, botanical and entomological laboratories as well as a good scientific library. There are also experimental farms at Lyallpur, Gurdaspur, Hansi and Sargodha, the object of which is to carry out experiments with different varieties of crops in order to ascertain their suitability to particular tracts, to see the effects of rotation, irrigation and manuring, and to test the relative usefulness of different types of agricultural implements. Demonstration and propaganda work is conducted by means of special farms, fairs, loans of improved implements, distribution of printed leaflets and sales of seeds from departmental depots.

The work of agricultural improvement has received special attention from the Government of India since the Great War. A Royal Commission on Agriculture was appointed in 1926 to make a thorough inquiry into the condition of Indian agriculture, and to suggest ways and means for its progress and development. The commission recommended *inter alia* :—

(i) The establishment of an Imperial Council of Agricultural Research to promote, guide and co-ordinate

agricultural research throughout India. It should have at its disposal a research fund of 50 lakhs of rupees to which additions should be made from time to time. Out of this fund scholarships should be awarded, research workers trained and provincial research committees should also be formed.

(ii) All the resources of the state should be brought to bear on the problem of rural uplift and there must be a simultaneous, all-sided progress in research, demonstration work and propaganda, animal husbandry, control of cattle diseases, afforestation, irrigation, communications, marketing, co-operation and education.

Rural Reconstruction.

The government has accepted the commission's report as the basis for a policy of rural reconstruction, and it is hoped that substantial progress will result from the efforts which are now being made in many provinces.

From ancient times agriculture has been the main industry in most countries. It meets the primary needs of the people and yet its interests have more often than not been jeopardized in the attempt to encourage manufacturing and other industries. This neglect of agriculture continued for some time because certain so-called industrially advanced nations could get their raw material from other peoples' territories and sell to the rest of the world vast amounts of their machine-made goods. But now, even countries with big empires to support them find it dangerous to continue relying exclusively on their distant colonies for the supply of raw materials. They have turned their attention to their own natural resources in order to meet, as far as practicable, all their requirements so as to become independent economic units. Agriculture has received a new emphasis such as it has never had before; its importance in the "home"

economy has been realized and far-reaching measures have been adopted in order to bring its efficiency to the maximum level. In Canada, a wheat pool was started in 1922 while in the U. S. A. the Governments, both Federal and State, have assisted the cultivator very materially. The farmer is supplied with up-to-date information about land culture, and some 3,000 experts have been appointed to disseminate knowledge among the peasantry. In Eastern and Central Europe, more perhaps than anywhere else, stringent measures have been adopted to change the existing system of land ownership which was a source of constant friction between the "have" and the "have nots" and which it was realized, through absentee landlordism, encouraged inefficiency in the cultivation and waste in the use of natural resources. Efforts are being made in many countries to create peasant-proprietorships and various methods have been adopted to make the position of the new owner-cultivator strong and effective. The unexpected slump in the prices of agricultural produce has disturbed the calculations of the reformist, but many beneficial changes have been made. Practical results are to be seen not only in the shape of the improved dignity and material welfare of the peasant, but also in the greatly enhanced quality of food and other agricultural products made available to the markets of the world.

These world movements have had their natural reaction in India. Agriculture here has not been flourishing for a long time and the recent catastrophic fall in the prices of agricultural produce made the position of the farmer worse than ever. It also considerably reduced the revenues of Government and adversely affected all business in the country. It is a truism that "the prosperity of the peasant is the prosperity of the country and it is therefore rightly urged that nothing should be left undone to improve the

farmer's economic condition. It is obvious, however, that conditions in India are not like those of the West and nothing in the nature of drastic measures can be adopted here at present. The energies of the people have hitherto been absorbed in political affairs and they have had neither the time nor the inclination to start a popular land reform movement. It is only the government which has hitherto chalked out a programme of economic reform and has been mainly responsible for carrying it through. The campaign for agricultural changes in India has throughout lacked the necessary sting as no executive, however efficient it may be, is in a position to adopt strong measures unless these are based on a healthy public opinion. The problem of peasant discontent is ever-present, and once the farmer begins to consider seriously his unfortunate and unsatisfactory condition, then it will be difficult to *shelve* a solution.

In the present arrangement for rural reconstruction work, we find that government is attempting to influence both economic and social spheres of village life. Among the measures suggested were included :—

1. Vaccination.
2. Village sanitation.
3. Ventilation of houses.
4. Conservation of manure.
5. Control of mosquitoes.
6. Distribution of improved seeds.
7. Popularization of new and better crops.
8. Fighting of insect pests and plant diseases.
9. Live-stock breeding.
10. Organization of the sale of milk and ghee in the towns.
11. Educations of girls.
12. Encouragement of cottage industries.
13. Afforestation and improvement of grazing areas.

This is the official programme comprehensive and im-

posing enough, and, if carried out, this should undoubtedly improve village life in India. There are many government departments interested in different items of the programme. In the Punjab, for instance, in addition to the main work done at Lahore in the offices, there is the Punjab Rural Community Board, which functions under the presidency of a Minister, and also a number of District Community Councils under the charge of various local officers.

Rural Reconstruction work was first started in the Punjab by Mr. F. L. Brayne who was appointed Deputy Commissioner there at Gurgaon in 1920. By means of his official influence and by lecturing and touring from place to place he was able to create some desire among the villagers for their own improvement. In the United Provinces there are village councils and co-operative societies for arbitration and better living and a Rural Training class in Benares for the benefit of village teachers. In the south the work is mainly done through the agency of the Y. M. C. A., and other non-official bodies of a "missionary" type. Their activities are spread over a wide range. They maintain dispensaries and village libraries, encourage the use of manures, good seeds and improved implements of agriculture ; provide facilities for opening credit societies and starting village industries such as poultry, bee-keeping and gardening, and work for the hygienic and sanitary improvement of the village. There are many Y. M. C. A. centres where classes are held for the training of rural workers. A short summer course was at first given at Ramarathapuram in Nilgiri and later on a six week course was started by the Martandam Rural Association in Travancore.

There are thus a number of agencies, official, social and religious, which are at present working for the betterment of rural India. The results, however, are not as satisfactory as they might be because of the lack of co-operation among

the different organizations. Government departments have worked as separate entities, and formerly little attempt seems to have been made to co-ordinate their activities. This defect has now been realized and recently new appointments were made of Commissioners for Rural Reconstruction, whose main function was to link the different departments and co-ordinate the work. The Government of the Punjab in its Budget for the year 1935-36 earmarked one lakh of rupees to finance this department and to provide an impetus for the general rural uplift movement in the province ; a further one crore of rupees was allocated by the Government of India to assist the provinces in their own village welfare activities. All these measures were intended to help the villages, but they did not provide complete solution of the problem. Bad finance, continued division of land into small fragments and the bad exercise of communal authority, constitute the main and imperative problems before the Government and the country. Unless, and until, these are satisfactorily and adequately solved it will not be possible to bring about much permanent material improvement in the conditions existing in Rural India and hence in the welfare of its people.

The Banking Inquiry Committee in their report (1931) also laid emphasis on the recommendation that the Government should follow a progressive and constructive agricultural policy for the purpose of fostering profitable agriculture under modern conditions. To provide government with the information required for pursuing such a policy, and to assist government departments to promote the welfare and prosperity of the agricultural population, the committee recommended the establishment of Provincial Boards of Economic Inquiry similar to that set up in 1919 in the Punjab, which has conducted detailed investigations

into various problems connected with the economic life of the province.

Irrigation.

Agriculture in India cannot afford to depend exclusively on rainfall or its water supply. There are many parts of the country such as Sind, Rajputana, and the south-western Punjab, which are almost rainless ; before the introduction of scientific irrigation, these areas were semi-desert, covered with sand and scrub. Not only is the rainfall scanty in these parts, but it is also uncertain ; valuable crops such as cotton, sugarcane and rice cannot be grown successfully, and if at all, they wither before maturity. Moreover, most of the rain in India falls in summer, and thus winter or *rabi* crops, such as wheat or rapeseed, can be grown only over a very small area if there be no artificial irrigation. The welfare of thousands of people depends upon the adequacy or otherwise of irrigation and it has been practised in India from time immemorial, especially from wells and tanks. The British contribution to the irrigation system consists in the large canal works constructed for the purpose of utilizing the surplus water of the big rivers.

There are thus three main types of irrigation in India : wells, tanks and canals.

(i) *Wells*. These have been used from very early times, and even now, irrigation from them amounts to about a quarter of the total. They demand a fairly high level of subsoil water, and where underground water is abundant, it can be lifted by means of Persian wheels ; in districts where the water level is low these are replaced by the rope and buckets. Well-irrigation was but rarely practised formerly, if the depth of water was much more than 35 feet, as the cost of lifting was excessive in comparison with the value of the crops. Thanks, however, to the efforts of the Engineering Section of the Agricultural Depart-

ment, the utility of wells has been increased by sub-artesian bores and the installation of small electric power pumps. Tube-wells are also being introduced. Wells are mostly set up and owned privately, but the government encourages their construction by the grant of *taccavi* loans, and by exempting the improved land from extra assessment. The Agricultural Commission further recommended that the state should assist in the construction of tube wells by the provision of technical advice, by more *taccavi* loans, and by placing boring equipment and skilled labour at the disposal of the landholders on payment of moderate fees. In 1937-38, there were 2,581,582 wells which irrigated 12,610,658 acres of land. The largest number of wells was in U. P. followed by Madras, Punjab and Bombay.

(ii) *Tanks and Storage Works.* These have been in vogue in India for a long time, but they are practically unknown in the Punjab and Sind. Tank irrigation is common in Madras, Mysore, and Hyderabad, where the roadside village pond is an important feature of the landscape. Storage works are constructed by building a dam across a valley to catch the rain water during the monsoon. The water thus held is distributed to the neighbouring lands by means of channels and canals. Tanks and storage works have been constructed both by private and state enterprise. The biggest in India, the Osman Sagar, has been constructed by the Nizam's Government in Hyderabad.

(iii) *Canals.* These are now the most important methods of irrigation in India, and half the irrigated area is watered by canals. They are of two kinds, *viz.*, Perennial, and Inundation. The former are those taken from the snow-fed rivers, or from those which have an assured supply of water throughout the year owing to heavy winter rains, and are to be found mostly in the Punjab and Madras. The Inundation canals flow only when the rivers

are in flood, *i. e.*, in the monsoon months, and they are made by cutting shallow channels in the river banks. Many areas in Sind and the Punjab are irrigated by such canals drawn from the Indus and the Sutlej respectively. Formerly in Sind most of the canals were inundation, flowing only when the water level of the Indus was high *i. e.*, from June to September ; no irrigation was, therefore, possible during the dry months, but the Sukkur Barrage, opened in January 1932, has remedied this defect. A weir was constructed across the Indus and by means of this it is possible to maintain the water level in the canals above the dam at a sufficiently high level to provide flow-irrigation all the year round.

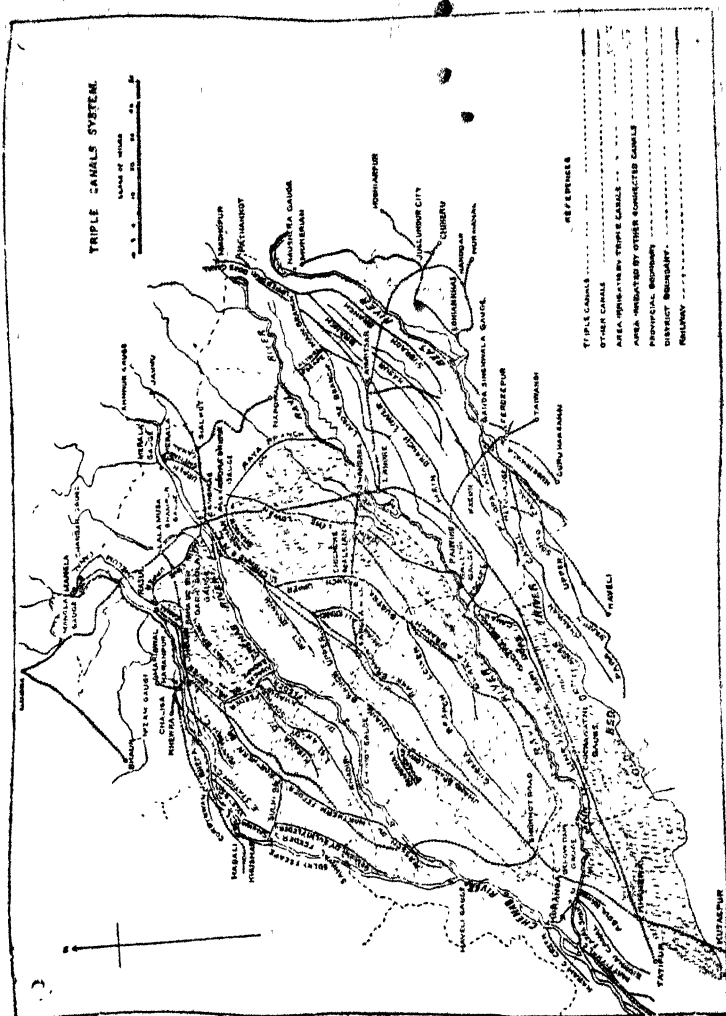
Early Efforts of Irrigation.

Government as well as private irrigation works existed in India for many centuries before the introduction of British Rule. In 1356 the Emperor Ferozshah opened a canal 180 miles long from the river Jumna in order to supply water to his hunting lodge at Hisar ; it silted up and was re-excavated in Akbar's reign. In 1626 Ali Mardan Khan, Emperor Shah Jahan's Persian Engineer, brought to Delhi a branch of this canal for the royal gardens and fountains. Later he constructed a canal from Madhopur to bring water to the Shalamar gardens at Lahore and later, during the Sikh Rule, a branch of this called the Haasli canal, was taken to Amritsar to fill the sacred tank of the Golden Temple. Most of the works constructed by Mughal Emperors were for their own personal enjoyment. There was a number of inundation canals also dug by the people, with some help from the Sikh rulers in the Punjab, but the lack of capital and engineering skill, insecurity of tenure, frequency of invasions and political dissensions, in the country, prevented the growth of any regular system of canal-irrigation.

The East India Company repaired the Ganges and Jumna Canals and the Grand Anicut (canal) on the Cauvery river early in the nineteenth century. The Godavari and Kistna works were undertaken in 1845 and 1857 respectively. The first irrigation work of a modern type was the Upper Bari Doab Canal in the Punjab. This was built with the object of training the disbanded Sikh soldiers of the Bari Doab into peaceful citizens, and was completed in 1859. A new impetus to Government construction came after 1866 when, in connection with the famine policy of the time, a big scheme for state irrigation works, financed by loans, was launched. The Sirhind canal, opened in 1883, was taken from the Sutlej and it irrigated about 15,00,000 acres of land in the districts of Ferozepur, Ludhiana and the States of Patiala, Nabha, Faridkot, and Jind. The Lower Chenab canal was opened as an inundation canal in 1887 and converted into a perennial canal in 1892. It is one of the largest canals in the world and has led to the colonization of a large part of the waste lands of the Punjab; it irrigates annually about 25,00,000 acres of land. Canal colonization was carried out extensively in the Punjab in the closing years of the nineteenth and the opening years of the twentieth century. Immense new acres, previously desert were turned into flourishing and fertile wheat and cotton producing districts.

Productive Works.

The canals that were constructed up to 1900 were expected to be remunerative to the Government, and within ten years of their completion were calculated to yield a net revenue sufficient to cover the annual interest charges on the capital invested by the Government in their construction. These are called "Productive Irrigation Works." The total mileage of productive irrigation works in India in 1937-8 was 57,547 miles which irrigated 24,526,167 acres of land.



Protective Works.

From 1901 onwards there was a distinct change in the policy of the Government. The Famine Commission of 1901 was of opinion that irrigation was as important for protection from famine as was railway construction; that it would prevent famines by increasing the food supply. The field for productive works was limited to the Punjab,

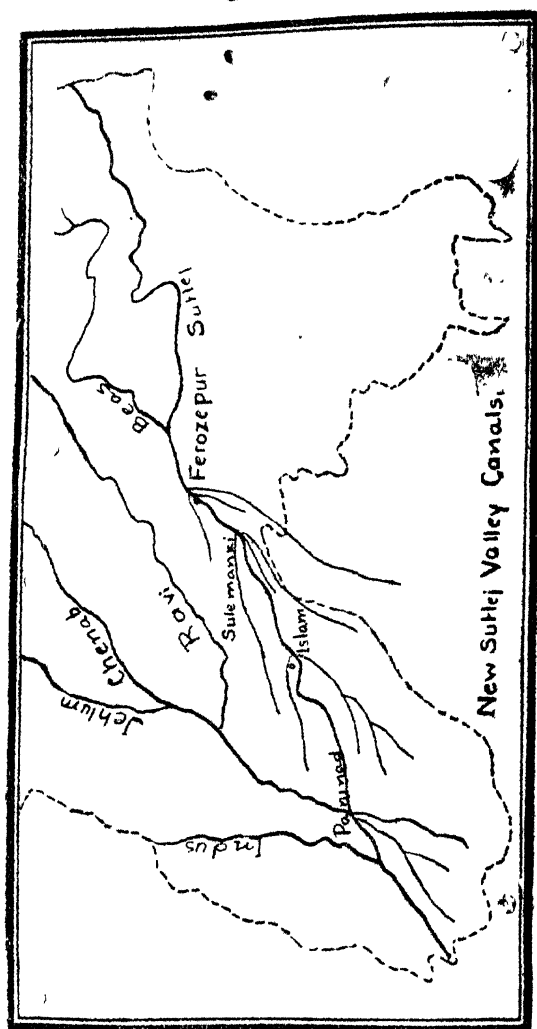
Sind and parts of Madras, but in the Deccan, where famines were more frequent and severe the Commission considered that there was no scope for productive irrigation works. They, therefore, recommended the construction of "protective" works, *i. e.*, those which would not be directly remunerative, but would ensure protection against famine for the areas where rainfall was precarious. The cost of the work was to be met from current revenues and from annual grants set aside for famine relief and insurance. In pursuance of this policy a large number of new works were undertaken and the money spent on irrigation was doubled. In the Punjab the chief unproductive canals are Indus, Muzaffargarh and Shahpur Inundation canals, Ghaggar and Panjnad Head Works.

Irrigation has come under the control of provincial governments, which have now wider financial powers, and thus increased initiative for the construction of canals has resulted. Since 1922 remarkable activity has been displayed in irrigation. The total capital outlay, direct and indirect on irrigation and navigation works, including works under construction amounted to Rs. 150'28 crores in 1937-8. The gross revenue for the year was Rs. 1,351 lakh giving a return of about 5'91 per cent on the capital invested. The more important new projects are :—

(i) *The Triple Canals Scheme of the Panjab* is one of the largest irrigation works attempted in India. Its main object is to irrigate a tract of country lying between the Ravi and Sutlej rivers and bounded on the south by the Jhelum, at the point where the Upper Jhelum Canal carries the water of that river into the Chenab, above the headworks of the Lower Chenab Canal at Khanki. The lower canal is thus fed with Jhelum water and the Chenab water so released is taken from the new headworks at Mangla into the Upper Chenab Canal which is the second link in the Triple Canal scheme.

The project is a fine piece of engineering skill. At Mangla the head of the Upper Jhelum Canal, the regulator is a massive dam and the canal crosses several drainages by means of crossing syphons, culverts or inlets. The Upper Chenab Canal is the largest perennial irrigation canal in the world and it crosses the Ravi at the Balloki level crossing, which is the largest work of its kind yet constructed. It consists of an inlet combined with the last fall of the Upper Chenab Canal, a barrage across the river, and the head regulator of the Lower Bari Doab Canal, (as this part of the scheme is called), on the other side of the river. This lower canal is 195 feet wide and carries a discharge of 6,750 cusecs (i.e., cubic feet per second). The work which was completed in 1916, consists of 433 miles of main canals and 3,010 miles of distributaries. The total area commanded by the whole project is four million acres and its total cost was 10·6 crores of rupees.

(ii) *The Sutlej Valley Project* is the outcome of the Triple Canals scheme. To understand the project it is necessary to realize the conditions prevailing in the Sutlej Valley. There are on each bank of the Sutlej, both in the Punjab and in the Indian State of Bahawalpur, a long series of inundation canals, which drew their supplies from the river whenever the water level was high enough. These canals were liable to all the drawbacks which invariably attend inundation irrigation everywhere. There were no weirs at their heads and, in many cases, no means of controlling the volume of water entering them. Consequently, while a supply was assured in a normal year during the monsoon months, such supply was liable to serious fluctuations according to the seasonal conditions. The object of this project was to—



(a) Afford to the existing canals a controlled supply by the provision of weirs and head regulators.

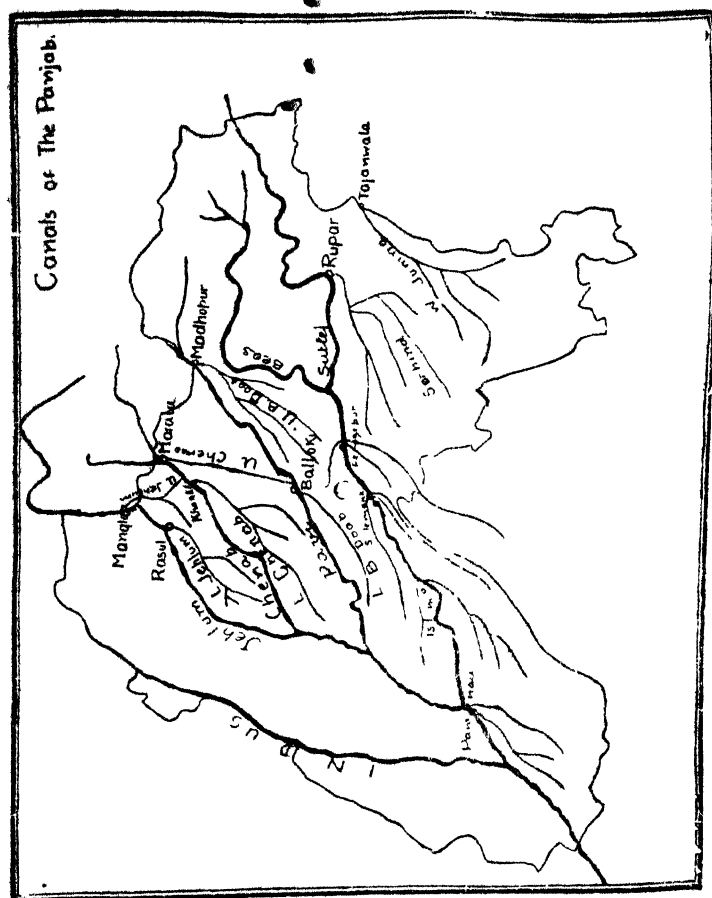
(b) Extend the areas irrigated by existing canals so as to embrace the whole low-lying area in the Sutlej valley.

(c) Give perennial irrigation to large tracts of lands on each bank of the river.

Four weirs have been constructed, three on the Sutlej (at Ferozepur, Sulemanki and Islam) and one on the Panjnad, from above which eleven canals have been taken off. Each weir controls about $1\frac{1}{2}$ million acres of irrigated land, the total annual irrigation being three times that under the Triple Canals project, *viz.*, five million acres, of which two million are perennial and three seasonal irrigation. It was completed in 1933 and the total cost was nearly 24 crores of rupees, but no less than three million acres of waste land has become available for colonization and sale. In addition to this the Thal Canal, Wooler Lake Barrage and the Bhakra Dam project will add a considerable area if and when they materialize.

(iii) *The Sukkur ("Lloyd") Barrage and Canals* form one of the greatest irrigation works in the world. The scheme provided for the construction of a large dam across the Indus, three miles below the Sukkur Lansdowne Bridge and the excavation of seven canals, three on the right, and four on the left hand side of the barrage with their branches, distributaries, minor canals and water courses. Construction was put in hand in July 1923 and the opening ceremony was performed by Lord Willingdon in January 1932. It marked the beginning of a new era of economic, and especially agricultural prosperity for Sind. It represents the latest development in the process of improvement and extension of the primitive inundation canals which have been there ever since the British occupation of Sind in 1848.

The barrage itself is a huge river regulator over a mile in length consisting of 66 spans, each sixty feet wide. The regulation of these openings is effected by means of steel gates, each weighing about 50 tons, ordinarily operated by electricity, although they can be worked by hand. The completion of this gigantic irrigation project was rightly claimed to be a great engineering feat. An idea



of the magnitude of the vast undertaking can be gathered from the fact that the total length of the canals and distributaries is over 6,400 miles, and three of the main canals of the system have bed levels broader than the Suez Canal. The cost of the whole scheme is nearly Rs. 20 crores. It irrigates nearly $5\frac{1}{2}$ million acres of land and of this about $2\frac{1}{2}$ million acres was not previously under cultivation. "The turbulent waters of the Indus," remarked H. E. the Viceroy at the opening ceremony, "have now

been harnessed for the sake of the people; so thorough has been the work, that not even the floods of 1929 and 1930 had been able to break the bounds of discipline."

The object of the scheme is to bring much hitherto uncultivated land under perennial irrigation and to convert a large area under inundation cultivation into a perennially irrigated area. The total area in British territory commanded by the scheme is 7,494,000 acres, of which 6,529,000 acres are cultivable. The following figures* show the position of Sind agriculture for the ten years prior to 1918, on which the project was based and the anticipated cultivation in 1962, when the scheme is expected to be fully developed 30 years after the opening of the Barrage :—

	average 1917-18	1962
<i>Kharif Crops</i>	Acres.	Acres.
Rice	507,000	763,000
Cotton	236,000	760,000
Others	909,000	784,000
Total <i>kharif</i>	<u>1,652,000</u>	<u>2,307,000</u>
<i>Rabi Crops</i>		
Wheat	187,000	2,541,000
Others including leguminous	338,000	622,000
Total <i>Rabi</i>	<u>525,000</u>	<u>3,163,000</u>
Total annual cultivation	<u>2,177,000</u>	<u>5,470,000</u>

The success of the scheme depends mainly upon the expansion of the winter crops and the cotton crop. The *rabi* crops, it is expected, would be six times larger and the

*Statistics taken from a lecture delivered by Sir Arnold Musto on "The Lloyd Barrange and the future of Sind" published in the Civil and Military Gazette, dated November 9, 1934.

increase in the *kharif* cultivation would be about 40 per cent.

In spite of the present abnormally low prices which have shaken the economic equilibrium of all the provinces, the progress so far made by the Barrage promises a good future for Sind. The wheat crop in the first season after the completion of the scheme was four times its average for the five years ending 1930-31, and has shown a surplus of six to seven lakhs of maunds, after making a due allowance for home needs. This surplus, as was to be expected, was exported to Karachi, which formerly received almost all its supplies from the Punjab. The anticipated increased production of wheat in Sind, resulting in increased supplies of wheat to Karachi, and hence reflecting detrimentally on the wheat exports of the Punjab is a problem requiring serious consideration.

THE HAVELI PROJECT which was estimated to be completed within four years at an estimate cost of 536 lacs has been completed by the Punjab Government within less than half the time and at 1 crore and 86 lacs less than the estimated cost. The project was designed to irrigate the land lying along the banks of the Chenab river below the junction of the Chenab and Jhelum rivers at Trimmu and to utilize part of the supply available from both these rivers. The junction of these two rivers takes place about ten miles northward of Haveli Bahadur Shah and some 80 miles above Multan. The main object of the scheme is to transfer the waters of the Jhelum and the Chenab into the Ravi near Sidhnai through a large canal.

A portion of the area commanded by the Haveli Scheme received uncertain supplies during the hot weather from the Chenab and the Sidhnai inundation canals into which these two rivers naturally overflow when their waters are high enough but a large portion of the crops grown in the land thus irrigated failed to attain maturity. The scheme provides for the command of over a million acres

of which half a million acres will be irrigated throughout the year and nearly half a million would receive non-perennial irrigation.

The Emerson Barrage constructed across the confluence of the Jhelum and Chenab rivers contrives to raise the water level to a suitable height to flow into a feeder canal leading into the Ravi above the existing Sidhnai Weir. The scheme also provides for extra water for the Pakpattan Canal and Burala Branch extension of the Lower Chenab Canal which receive a perennial supply. The undertaking relieves the lower Bari Doab Canal of the necessity of passing down water from Baloki for the Sidhnai Canal and thus leaves extra supply of water available from the famous triple canals. The total area irrigated by the Haveli Scheme in 1939-40 was 7,23,804 acres. Cotton and wheat are the chief crops grown on the irrigated areas which mainly lie in the Jhang, Multan and Muzaffargarh districts. The return on the capital outlay is estimated at more than 8 per cent. The work was commenced in October 1937, and was completed in the beginning of 1939. The main canal, 43 miles in length, is lined with reinforced concrete brick masonry.

The Punjab Government sanctioned the construction of the Thal Project in June 1939. It is designed to irrigate about 270,000 acres of kharif and 561,000 acres of rabi crops annually in the tenth year after opening. The project is estimated to cost Rs. 8.70 lakhs. Construction of the main canal and the branches was suspended in 1940, the head-works at Kalabagh is, however, likely to be completed during 1945-6. The Bhakra Dam Project designed to irrigate Rohtak and Hissar Districts, is estimated to cost Rs. 12 crores. It is being overhauled at present.

(iv) In the United Provinces an important canal project, called the Sarda Canals, was recently completed. In the Western part of Oudh, and in parts of Rohilkhand, there are large tracts where the rainfall is uncertain and hence cultivation was very precarious. A big canal has

been taken off from the right bank of the Sarda, a river coming from the snow-covered Himalaya Mountains and passing through Oudh, which joins the Gogra river, a tributary of the Ganges. After seven miles this big canal is divided into two main branches; one known as the Sarda-Oudh Canal, irrigates 14 million acres of land in Oudh, and the other branch, known as the Sara Kicha Canal, provides irrigation to a part of Rohilkhand, but mainly it pours its water into the Ganges to provide an increased supply of water in the Lower Ganges Canal for the irrigation of Jamna Doab. Sugarcane is now largely cultivated in the areas irrigated by the canals. The projects under consideration in 1937-8 were the construction of reservoir at Khutgaon and Shahzad Nadi, Ahraura Canal and the Eastern Grid Project.

(v) In Madras the works consist of storage reservoirs to collect the water of great rivers and streams. At Metur on the river Cauvery a big dam has been constructed. It is 200 feet high and it can store 90,000 million cubic feet of water. A canal 88 miles long with a connected distributary system has been opened in the Delta region. It has improved the already existing, but fluctuating water supplies of the Cauvery Delta canals, irrigating over a million acres. It has also extended irrigation to a new area of three lakh acres, which will add $1\frac{1}{2}$ lakh tons of rice to the food supply of the Madras Presidency. Hydro-electricity is also being developed at the Metur Dam. The Madras Government has also constructed another dam across the Periyar, a small river in Southern India, and made a tunnel through the Western Ghats through which the water is led to the East Coast strip where it irrigates the district of Madura.

(vi) In the Bombay Presidency two important dams have recently been completed to supply irrigation to the Deccan Plateau: (a) The Wilson Dam, at Bhandardera which is the highest dam in India, has been constructed in the Western Ghats on the river Pravara, a tributary of the

River Godavari. It stores 10,800 million cubic feet of water and supplies irrigation to 57,000 acres of land in the Ahmednagar District. (b) Lloyd Dam at Bhatgar, which is the largest mass of masonry in the world, has been constructed in the Western Ghats on the river Nira, a tributary of the River Kistna. It supplies irrigation in the districts of Poona and Sholapur.

Punjab Canal Colonies.

The largest system of irrigation works in the world are in the Punjab where the problems to be faced have been different from those in other parts of India. Before the start of irrigation work in the eighties of the last century, the vast stretch of the country now irrigated by the Lower Chenab, Jhelum and Bari Doab Canals was a desert, owing to the meagre and precarious rainfall. Hence it was necessary, simultaneously with the introduction of irrigation, to transport bodily whole communities into the new areas opened up by the canals.

The colonists were judiciously chosen by the revenue officers from the congested districts of the province and from among the classes of hereditary landlords or occupancy tenants who, received the so-called peasants' grants under which the bulk of the land was allotted. The terms of the grant varied in different colonies but the average area allotted to each individual was generally from $1\frac{1}{2}$ to 2 squares *i.e.*, from about 33 to 50 acres. Larger grants were made to the wealthier hereditary landholders and to men of means who wished to experiment in improved methods of cultivation and irrigation. Grants were also made in recognition of special civil or military services to Government.

Before the colonists arrived the alignment of water courses was made; the land in each colony tract was demarcated into large and small squares and rectangles, the village boundaries were settled; roads were marked out, and land was set aside for grazing and commercial purposes; the

colonists on arrival had to build their houses and break up the land allotted to them. These colony villages are thus systematically planned and they possess sanitary advantages superior to those of the older villages.

Altogether three big and six small colonies have been established. The former are, Lyallpur, Shahpur, and Montgomery; and the six small colonies are the Sidhnai, Sohag Para, Jhang, Chunian, Upper Chenab and Upper Jhelum. All the nine colonies together cover about five million acres of land. With the opening of the Sutlej Valley Canals and the Haveli, the Nili Bar Colony has also been established and this will cover nearly another one million acres.

The peasants in these canal colonies seem to be much better off than their brethren elsewhere in India. Their standard of living is higher than that of the peasants in most other parts of the Punjab. Agriculturists from the congested districts of Hoshiarpur, Jullundur, Amritsar and Gurdaspur have settled there, and many of the original nomads of the tract have taken to agriculture and are thus earning an honest livelihood. New towns such as Lyallpur, Jaranwala, Sargodha, and Bhalwal, have grown up and the value of the land has greatly increased; the Government have derived large profits from the sale of lands and from water charges. In the words of Mr. Darling, "The colonies have in fact opened up for the Punjab an era of prosperity unheard of in the past."*

The following table gives details of government irrigation works, in India in 1937-8.

* M. L. Darling: "Punjab Peasant in Prosperity and Debt," p. 182

Province.	Net acreage cropped (1,000).	Acreage irrigated by Government irrigation works (1,000).	Percentage of (2) to (1).	Capital cost (Rs. 1,00,000).	Value of crops (Rs. 1,00,000).
Madras	36,918	7,565	20.5	2,025	2,198
Bombay	28,591	489	1.7	1,077	243
Bengal	29,720	200	0.8	532	110
U. P.	35,542	5,164	14.5	2,910	2,339
Punjab	31,573	12,292	38.8	3,586	4,032
Bihar	19,323	663	3.4	356	275
C. P.	20,658	317	1.5	679	90
N. W. F. P.	2,519	460	18.3	321	139
Orissa	6,448	384	4.7	330	128
Sind	5,441	4,849	89.1	3,001	1,028
Rajputana	393	27	6.8	36	8
Baluchistan	471	22	4.8	145	4
Total	217,597	32,432	14.7	15,028	10,494

Economic Effects of the Canals.

The economic benefits conferred by the canals may be summed up as follows :—

1. There has been steady growth in the area in India irrigated by government works, from 10.5 million acres in 1887-9 to 32 millions in 1937-8 when the estimated value of crops grown on the areas supplied with water from these state irrigation works was Rs. 104 crores. This has led not only to an increase in the produce, but also to the introduction of new crops such as American Cotton. The Indian canal system is by far the largest in the world ; it already irrigates 32 million acres annually. This will be increased to 37 million acres when the works under construction are completed, and when the various new canals are developed fully, will probably reach 40 million acres.

2. The export trade of the country has greatly increased but, on account of the world depression, India being an agricultural country, has been hard hit during the last eight years.

3. The canals have averted the danger of famine in many districts and have steadied prices ; no disastrous famine over an irrigated area has occurred since 1901.

4. The pressure of population in congested areas has been relieved.

5. The revenues of the government have increased not only directly, from the sale of crown and wasteland, and from land-revenue and water rates, but also indirectly because of the growing prosperity and increased productive capacity of the people. The water rates vary considerably with the crop grown and are different in each province. Thus in the Punjab they are Rs. 6/- to 11/- per acre for sugarcane, 4/- to 6/- for rice, 2/4/- to 4/4/- for wheat and 3/- to 5/4/- for cotton. Irrigation revenues form an important item in the provincial budget.

6. Irrigated forest plantations have been established, such as those at Chhanga Manga and Chichawatni in the Punjab.

7. Experiments in scientific cultivation have been improved and a considerable amount of water power made available.

8. The peasants living in the canal irrigated areas are generally better off than those farmers who depend on rainfall or other sources of irrigation. The standard of living of the former is higher as compared with that of the latter.

Canals have, however, not proved an unmixed blessing and have introduced a new problem of water-logging, which has affected as many as eleven districts in the Punjab in which 108,735 acres have gone out of cultivation on this account. The Water Logging Board in the Punjab is, however, seriously grappling with the problem and we may hope some ways and means would be found out to retain the area affected and prevent further loss of good land.

Famine and Famine Relief.

Famines before Railways. The word famine, as commonly understood in India, means a total want of food by large numbers of people, with consequent starvation, suffering and death. We have seen how the self-sufficing

villages produced the crops their people required ; little was laid by for any time of need and there were scarcely any means of saving. If, in any harvest, the rain missed, or did not come in time in any district the crops failed ; or, if the crops in any season were destroyed by insect pests such as swarms of locusts, or by hail, frost, storm, flood, war, or pestilence, then there was a lack of food and famine conditions prevailed in that district, even though there might be ample food in the neighbouring areas. People depend on the "good-will of nature and suffered when it was not generous."

Nature of Famines To-day. Crops are now grown not only with a view to home consumption, but for sale at a profit ; large quantities of food materials and other raw produce are exported from the country. It is seldom that there is a complete failure of crops all over India ; there may be scarcity in one part, but plenty in another ; whenever there is a lack of food in any district, it can be carried there from a region in which there is a surplus. The total food supply of the country in any year is sufficient for the needs of the people, hence there is no fear of scarcity in any part of the country.

What then do we mean by famines ? India is predominantly an agricultural country. A vast majority of her people depend solely on agriculture, and in most parts there is seasonal unemployment in agriculture from five to nine months in the year during the slack season. There are not many suitable subsidiary or supplementary industries to keep the people engaged. The holdings of the cultivators are extremely small and scattered. The people are mostly poor and have nothing to fall back on in time of need, consequently whenever there is a succession of bad harvests, owing to scarcity or irregularity of rain, agricultural operations are suspended and much of the labour employed in agriculture and in industries subsidiary to agriculture, disengaged. Even though there is food in the country, people without work have not the money to buy it, but those who have

money do not suffer as they used to do in former days. There is no special suffering or starvation in any particular district, but throughout the country poor people, who have no savings to fall back on, suffer because there is serious unemployment.

Causes of Famine.

The causes of famines are therefore no longer outside the control of men, but they are due to the—

(i) Dependence of the vast majority of the people on one single industry, *viz.*, agriculture.

(ii) Existence of uneconomic holdings,* which cause poverty among the people, who live from hand to mouth and have no reserves or resources on which to fall back in times of stress.

(iii) Absence of organized credit facilities and the inability of the people to obtain money in time of need.

(iv) Pressure of population on the land is great and there are few industries to draw off the surplus population and afford to the people an alternative means of earning a livelihood.

(v) Scarcity of agricultural capital.

(vi) Agricultural labourers are uneducated, untrained and ignorant.

The result of all these things is that even in good years, production is not as great as the quantity and quality of land under cultivation and the number of people at work on it warrant.

Famines and Crises.

In all industrial countries there are recurring periods of depression, or what are called "Crises" Production in

*An average family in the Punjab is approximately of 4.8 members. By application of Atwater's Scale of Adult male units the average family is reduced to 3.5 male units. The average expenditure per male unit in the Punjab in 1937-8 was Rs. 67-10-0. Thus the total expenditure required to maintain a family would be Rs. 236-11-0. The net income per acre in the same year was Rs. 15-14-0. The total land thus required for each is approximately 15 acres. The average proprietary holding in the Punjab however is a little more than 10 acres. Agriculture is not an attractive occupation and it is probably one reason why the sons of zemindars prefer to accept Govt. services.

modern industry is not direct but for a market. Cloth, for instance, may be produced in Lancashire to be sold in India and China, and if for any reason the demand for cloth in these Eastern markets falls, there will be a stoppage of the production of cloth in Lancashire, and the operatives employed in the mills there will be thrown out of work. This will have its effect on other industries and the trade and commerce of the entire district will be dislocated. When this happens on a large scale there is said to be a crisis. There are periods of activity and hopefulness in industry which lead to overproduction *i.e.*, the production of more commodities than can be sold in the market at a profit. Crises come in all industrial countries after periods of business activity; there are alternative booms and slumps; in fact there cannot be one without the other.

Famines in India now are very much like the crises in industrial countries. From 1930 to 1932 we had a period of agricultural depression, not because there was a scarcity of food products but because there was plenty; famine conditions prevailed in the country even though grain was cheap. There was an overproduction of grain compared with the capacity for consumption; crops could not be sold at remunerative prices. The agriculturists suffered even though there was enough, in fact too much, food in the country.

Other industries do not depend so much on climatic conditions as does agriculture, which in India is so organized that the average cultivator has an insufficient margin for saving. Consequently whenever there is a failure of the monsoon, or some other natural cause of scarcity, there is a famine which in time may be due to scarcity, or to plenty.

It should be borne in mind that "plenty" does not necessarily mean that there is a very large production of grain in India, but rather that there is such a large supply available that the grain cannot be sold at a reasonable

margin of profit in the world's markets. Famines in India come, not as the result of overproduction of grain, or as a result of over-activity, but mostly as a consequence of crop failures in the country. Occasionally they are due to a fall in the world prices of food grains and other raw products of India. The nature of famines has been altered more in form and effect than in its fundamental causes.

History and Periodicity of Famines in India.

Famines have been common in India from the earliest times, and numerous descriptions of them are to be found in Sanskrit and Pali literature. They were frequent under the old rulers, and frightful when they came. "In 1630" says Sir William Hunter in his "History of British India," "a calamity fell upon Gujrat which enables us to realize the terrible meaning of the word famine in India under native rule. Whole cities and districts were left bare of inhabitants." We are also told that in the famine of 1291 whole families drowned themselves as an escape from starvation, and that in the famine of 1555 people tried to live on the hides of dead animals. Not only were famines severe but they were also frequent. From 1700 to 1752 (*i.e.*, within the space of about fifty years), there were in the neighbourhood of Madras and Bombay alone, no less than eight famines. There is not, however, much information available regarding famines before the railway era, since the means of communication were faulty and the silent sufferings of the people did not become widely known; there was no system of regular reports nor relief measures for famine. Earlier historians confined their attention more to the doings of kings and rulers, their satellites and courtiers than to the economic life of the common people.

With the assumption of territorial sovereignty by the East India Company, information became more precise. We have a fairly full account of the Great Bengal Famine of 1769-70, in which one-third of the population of that

province is said to have died. There were some twelve famines during the days of the East India Company, and since the transfer of the government of India to the Crown, there have been some ten very acute famines. The Orissa famine of 1865-67 may be taken as the starting point, and this affected 180,000 square miles and 4,75,00,000 people. This is a landmark in the history of Indian famines because it induced the first big, organized effort to combat distress through government agency. The Bengal government was a little slow in appreciating the need for action, but later, food was poured into the district in prodigious quantities; still one-third of the population died in Orissa alone. This was followed by the Madras Famine of 1866 and that of Western India in 1868-70. The latter led to the emigration of more than half the population of Marwar. There was a famine in Behar in 1873-74 and then came the great South India Famine of 1876-78. This was very widespread and affected Madras, Mysore, Hyderabad and Bombay for two years, and in the second year it extended to parts of the Central and United Provinces and to a small tract in the Punjab. The mortality was very large; Government had not yet placed relief on an organized basis. The foundations of the present famine relief system were laid later, in accordance with the recommendations of the Commission which was appointed after the experiences of this famine. The suffering in the subsequent famines of 1892, 1896-7, 1900, 1907-8 and 1920 was considerably reduced as a result of the relief measures adopted by the government.

Famine Relief.

Lord Northbrook's government was the first to realize clearly that famines must be expected in India from time to time, and that it was the duty of the Government to frame a relief policy. This, in the beginning, however, was simply indiscriminate charity. Instructions were issued to every district officer that he would be held personally responsible if any deaths occurred from starvation that could

be avoided by any exertion or arrangement on his part, or that of his subordinates. This led to relief by way of food being supplied to people without making any arrangements to provide them with work or employment. Such indiscriminate charity led to demoralization and the policy was revised in 1877 when the Secretary of State defined the future policy in the following words :—

“The object of saving life is undoubtedly paramount to all other considerations. But it is essential that officers should guard against people relying too much upon government rather than upon their own industry and thrift. In the interests of the distressed population and tax-payers, precautions should be adopted against indolence and imposition.”

This policy was adopted and elaborated by the Famine Commission of 1880 under Sir John Strachey as President, when a code was drawn up and later amended by the Lyall and MacDonell Commissions. Provincial famine codes were also drawn up which prescribed the measures that government officials have to adopt during times of famine.

The Government of India is now in possession of adequate machinery to combat the effects of famine. In ordinary times it is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up-to-date, the country is mapped out into relief circles, reserves of tools and plant are stocked. Government officers have to be ready to act as soon as the signs of an outbreak of famine appear. The unmistakable signs of a coming famine, or the danger signals as they are called, are :—

- (a) Failure of rains and crops.
- (b) Scarcity of fodder.
- (c) Rise in prices.
- (d) Increase in the number of beggars and petty thefts.

(e) Prevalence of a general feelings of uneasiness.

(f) Contraction of private charity.

On the appearance of these symptoms the government makes a declaration of policy, non-officials are enlisted to help, revenue collection is suspended and loans for agricultural purposes are advanced. Test works are then opened and lists drawn up in every village of those who cannot work on the fields and who will starve if not assisted. If labour is attracted to the test works in very large quantities then they are converted into relief works such as railway construction or irrigation. These provide the able-bodied with employment and careful supervision is exercised and wages just sufficient to provide bare subsistence for a good day's work are given. Poor-houses are opened and gratuitous relief is given to the infirm, while relief kitchens are started for children in every village. On the advent of the rains the people are moved from the large works to the small works near their villages and liberal advances are made to agriculturists for the purpose of ploughs, cattle and seed. When the principal autumn crop is ripe, the few remaining works are closed and gratuitous relief ceases. All through this time the medical staff is kept in readiness to deal with cholera, which so often accompanies famine, and with malaria, which generally supervenes when the rains break.

For providing relief a Famine Insurance Grant was started in 1878 and a sum of Rs. 1½ crores was provided in the annual budget of the Government of India to be spent on direct relief if there was a famine, and on the construction of public works of a protective nature, if the year was normal.

Since the passing of the Government of India Act of 1919. Provincial Governments are required to contribute from their reserves a fixed sum every year for expenditure on famine; the annual assignments can be expended on relief only, and the sum not required

for this purpose is utilized for building up a Famine Relief Fund.

An Indian People's Famine Trust has also been constituted which now stands at Rs. 32,78,400. Only the income from the investment of this amount is utilized for relief work and in the beginning of 1937, a sum of Rs. 31,297 was available for expenditure.

Famine Prevention.

Side by side with the protection of the machinery for relief has gone the development of famine protection. Prevention is said to be better than cure and the Commission of 1880 stated that the best means of securing protection from the extreme effects of famine and drought were railways and irrigation. We have already studied the progress made in the construction of protective irrigation works and the effect of the railways in altering the nature of famines. We have also considered the work of the Agricultural Department in helping to increase the productive capacity of the peasants of India. It should be noted that the Forest Departments have also done important work in helping to regulate the rains and thus in preventing famine. The government has also introduced several measures to relieve the peasant from the burden of indebtedness. Co-operative Departments in some provinces have not only enabled the peasants to extricate themselves from the clutches of the money-lender, but also made them more self-reliant and frugal; they have also encouraged the consolidation of holdings. No less important is the work of the Industrial Department, especially when engaged in providing supplementary industries for the agriculturists. The ultimate remedy seems to lie in increasing the economic strength and resisting power of the people; their dependence solely on agriculture should be reduced and there should be a greater diversity of occupations in the country. The pressure of population on land is very heavy in India,

and it might be relieved by attracting labour from land to manufacturing industries.

SUMMARY

No limited agent of production can yield an unlimited amount of produce. If all the agents are available, their combination up to a certain point yields greater and greater returns per unit, but if the supply of any agent of production becomes limited, the returns begin to diminish. In the production of any commodity, when more and more of it is produced, if the cost of production per unit of output continues to rise, then the commodity is said to be produced under diminishing returns or increasing costs, when the cost of production per unit of output falls, the commodity is produced under increasing returns, or diminishing costs, when the cost of production per unit remains unaltered, the commodity is said to be produced under the law of constant returns.

Manufactures are generally said to be subject to the law of increasing returns, because the expansion of a manufacturing concern is generally accompanied by economies and cost of production per unit falls as the business is enlarged. The economies may be internal, a better utilization of machinery, labour and raw produce, or external, such as the growth of a railway station near a factory or the rise of a subsidiary industry.

The advent of power machinery and more division of labour has made large scale production possible and even necessary, with the result that --

(i) Land labour and capital can be used more economically and efficiently

(ii) There is less waste

(iii) There is more scope for experiments, for advertising, and enterprise

(iv) The advantages of increasing returns can be secured, industry is stronger and more stable

Large-scale manufactures must be limited to those industries which do not require minute attention to detail or artistic skill. It is not possible to enlarge any business beyond a certain limit which is variable for different businesses.

In agriculture the expansion of a business unit is possible either by adding more land, or by the cultivation of the existing area more intensively. In old countries there is little or no available supply of unoccupied land, and the limit to intensive cultivation is also soon reached, because the fertility of the land is somewhat exhausted by cultivation for centuries. Further, owing to the subdivision and fragmentation of land, facilities for the application of improved means of production are also limited, so diminishing returns appear very soon in the case of agriculture.

In India, although the tendency to diminishing returns is very strong, yet the recent efforts of the government have shown that there is still considerable scope for improvement and the tendency can be checked by:--

(i) Irrigation,

- (ii) Improved means of transport.
- (iii) Improved methods of marketing agricultural produce.
- (iv) Better rotation of crops, scientific manures, and improved seeds.
- (v) Use of improved tools and appliances.
- (vi) Education and training of cultivators.
- (vii) Consolidation of holdings.
- (viii) Provision of sound credit facilities to cultivators.
- (ix) Development of Co-operative Societies.
- (x) Rural Reconstruction.

The Departments of Agriculture have done very useful work in these directions.

Irrigation. As India is predominantly an agricultural country, it is necessary to try to make agriculture as stable as possible. But this depends largely on rainfall which is, in certain parts of the country, not only scanty but also uncertain. Thus irrigation is necessary to supplement it and this has been practised in India for a very long time. There have been wells all over the country, tanks in some parts, and canals here and there, often dug by some monarchs for their personal enjoyment. The construction of large irrigation works for the improvement of agriculture in India has been undertaken during the last 50 years or so, and there has been a steady growth in the area irrigated which rose from 10½ million acres in 1878-79, to 32 million acres in 1937-38. The main increase has been in the class of productive works and in 1937-8 the area irrigated was largest in the Punjab, followed by the Madras Presidency, U. P. and Sind. Three major works of exceptional importance have been completed, viz.,—Sukkur Barrage in Sind Cauvery in Madras and the Sutlej Valley in the Punjab.

The canals have increased the wealth of the country, barren lands have been converted into fertile colonies, new crops have been introduced, famines have been averted, the pressure of population in congested areas has been relieved, government revenues have increased, scientific cultivation and afforestation have been made possible.

Famine and Famine Relief. When every village lived on the produce of its soil people starved, if in any year the harvests failed for want of rains, or were destroyed by some other agency. India is primarily an agricultural country and so there have been famines from times immemorial. But whereas formerly, famines led to starvation for want of food, since the introduction of the railways, their nature has changed. In such a vast country there is seldom an insufficiency of food for the people as a whole; and now the effect of a failure of crops in any district, or province, is to make food grains dear and to throw the agriculturist out of employment. People suffer not for want of food, but for want of money; famines of food have thus been converted into money famines. The causes of famine are economic; they are very much like industrial crises; they may sometimes be due more to over-production than to a failure of the crops.

The Government of India quite early realized the responsibility of helping the people in time of famine and a regular policy and system of famine relief and prevention has been gradually built up by experience.

THE LAWS OF PRODUCTION

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Questions and Exercises.

1. What is the Law of Diminishing Returns? Is it applicable to all industries or only to some?

2. It is said that the Laws of Increasing, Diminishing and Constant Returns are not confined to particular industries but may apply to any industry at some stage of its growth. Explain this statement and give illustrations of its application.

3. Make a schedule of the cost of production of soap, showing how the cost per unit will vary with the quantity produced?

4. Why is it economical to produce certain commodities on a large scale? What industries are suited to large, and what to small scale production? Give examples of industries which cannot be carried on profitably except on a very large scale. Give reasons for your conclusions.

5. What are the relative merits of large and small scale farming? In which countries is each of them carried on? Which system is most suited to India?

6. Write a note on Peasant Proprietorship in the Punjab from the point of view of efficiency in farming.

7. What do you understand by the normal magnitude of a business?

8. Write a note on the agricultural depression in India in the years 1929-32?

9. How far does the Law of Diminishing Returns apply to agriculture in India? What efforts have been made to check its operation and with what results?

10. What are Provincial Departments of Agriculture? Write a note on the work of the Department of Agriculture of your Province during the last ten years.

11. Give a description of some important irrigation projects and draw a map to show the—

(i) Nature and extent of the canals and its distributaries,

(ii) Area irrigated.

(iii) Benefits to be derived from such irrigation.

12. Write an essay on Agricultural Education in India.

13. Give a description of a typical Punjab Canal Colony tract before, and after irrigation.

14. What are famines? How do they differ from industrial crises?

15. Give the history of Indian famines. How has Famine Relief developed by experience?

16. What measures has the government adopted for the prevention and relief of famines? How far, in your opinion, are these measures adequate? (P. U. 1935)

17. Explain money and real cost of production. (P. U. 1934)

18. What is exactly understood by famine in India? How have Railways and irrigation works affected Indian famines? (P. U. 1933)

20. Enumerate the different means of irrigation found in India, and explain the benefits that have accrued to the Punjab from the construction of canals. (P. U. 1936.)

21. The law of Increasing Returns is said to operate in manufactures and not in agriculture, why is it so? Give the disadvantages and limitations of large-scale production? (P. U. 1939.)

22. What has the Government done in the Punjab to improve the condition of agricultural classes? How far their efforts met with success? (P. U. 1937.)

23. Write brief notes on (a) Capitalistic production, (b) Modern markets, (c) Economic condition of the Punjab Canal Colonies? (P. U. 1937.)

24. 'The prosperity of the peasant is the prosperity of the country.' Why? What practical measures would you suggest for rural uplift in the Punjab? (P. U. 1939.)

25. What are the main types of irrigation in India and why is each type mostly used? (P. U. 1939.)

26. Explain the part which the Punjab Canal Colonies are playing in the economic development of the Province. (P. U. 1939.)

27. Write brief notes on (a) Consolidation of holdings (b) Rural Uplift, (c) Co-operative Societies (d) Village Administration. (P. U. 1939.)

SECTION III
EXCHANGE
CHAPTER XVII
VALUE AND EXCHANGE

Exchange.

By Exchange is meant the act of changing one thing for the purpose, or as a means of getting another thing. For instance, one man, A, has apples, and another, B, has oranges. They meet and A takes fancy to B's oranges while B would like to have A's apples. Exchange can take place between them, since A will be prepared to part with some of his apples in order to get the oranges and B will be prepared to give the oranges, for the apples. If some apples are exchanged for oranges it is because A considers the oranges more valuable than the apples, and B considers the apples more valuable than the oranges. Both A and B gain by the exchange and if no exchange had taken place between them, both would probably have regretted it. A would have had to go without oranges, however much he wanted to have some which B could easily have spared, and B would have remained without the apples that he desired. Exchange, like "the quality of Mercy is twice blest, it blesseth him that gives and him that takes."

Animals voluntarily do not exchange their possessions with one another as it requires reason and foresight in order to effect exchanges. There should be not only a desire to secure something which is in the possession of another,

but also the capacity to make the required sacrifice in order to obtain the thing desired, and the sense to compare the satisfaction to be gained by the possession of each of the two things—that actually owned and that desired. Further a man must be able to produce more than he himself requires of the things that he gives up, and also have confidence that he will be able to obtain the other thing that he wants. Exchange is the fundamental basis of economic progress, as it means an increasing rise in the standard of living; but, judging by what has happened all over the world during recent years, *viz.*, one country not allowing the goods of the other to enter without payment of very heavy duties, it appears as if this fundamental truth of economic progress and well-being has not been realized; at least it does not appear to be put into practice.

It is by means of exchange that the co-operation of men in production, conscious or unconscious, is brought about. One man can become a farmer, another a carpenter, another a doctor and so on, as exchange gives the power to circulate the result of individual efforts. It enables exertion of one kind in one place to be transformed into satisfaction of another kind and at another place. It is by means of the co-operation made possible by exchange, that the Punjab villager can get his kerosene oil from Burma, and cloth from Lancashire; that a man in England can obtain Karachi wheat for his bread and the raw cotton, with which to produce a shirt, from Lyallpur. Exchange has become so important and so common to-day that practically everything is produced in order to be exchanged.

In our study of the principle of Division of Labour, we saw that exchange was the means adopted for utilizing the abilities of different people, and variations of soil and climate of different places. It is through exchange that

cotton goods and get the most out of the black cotton soil and cultivators in the Punjab can specialize in the production of wheat. By this specialization the total produce is increased.

Competition.

Let us revert to the illustration of A exchanging some of his apples for B's oranges. A's object will be to obtain the largest number of oranges for the least number of apples, and B will attempt to secure the largest number of apples for the least number of oranges. If there are these two people only, and no one else from whom A can obtain oranges, or from whom he can get apples, A will be able to obtain as many more oranges than the minimum which B is prepared to give for an apple, as he can get by his superiority in bargaining over B.

But suppose A can obtain oranges not only from B but also from another person C, who also wishes to exchange oranges for apples. A's efforts will be to obtain a certain number of oranges for a given number of apples. In such a case there will be competition between B and C, as both wish to get apples from A; of the two, the one to get the apples will be the one who can afford to exchange the greater number of oranges per apple. The capacity of one to give more oranges will depend on his ability to produce them better and cheaper than the other. Competition in such a case stimulates production, brings about progress by a healthy rivalry, and helps consumers to obtain the best things at the least cost.

Whenever more than two persons meet for the exchange of goods, the effort to satisfy desires with the least exertion will lead them to compete with their fellow. If there is freedom of action; competition is natural, and under modern conditions it helps to adjust production to the demand for consumption. A man will produce only as much

as he wants for his own private use, but when production is for a market, it is regulated through competition. On the one hand, there is the rivalry between consumers to obtain supplies and on the other, struggle between producers to obtain orders for their goods. Men everywhere endeavour to discover what other people urgently want and then to satisfy these wants in the most efficient manner; this requires deliberation, promptness of choice and judgment, a habit of forecasting the future and self-reliance.

Very often the best qualities of men are brought out if there is free competition as, for example, when ten boys run a race for a prize, each will do his best. The fact that only one competitor secures the prize does not harm the other nine; in fact all benefit to some extent by the race, unless, as sometimes happens, malpractices creep in because of an inordinate desire to win. The competition may be bad or unhealthy where each competitor tries to injure the interests of the others, or when there is limitation of freedom in the competition. If one hundred men, who have no possibility of employment elsewhere, are competing for one job, then competition among them will be one-sided and will tend to reduce the wages for the work to minimum. If, however, there are other jobs available, the tendency will be to select the most suitable man for the post on a reasonable remuneration. Competition in a well-organized society merely determines and regulates the terms and conditions on which co-operation takes place.

Hinderances to Perfect Competition.

In actual life, however, perfect competition is rarely experienced as there are various hinderances in its way such as :—

- (a) THE FORCE OF CUSTOM AND HABIT, which is so strong in Indian villages that rents, wages and prices have all been largely governed by it for generations. Men get

used to a thing, and human nature is generally so conservative that it is not readily superseded. A man who is accustomed to wearing the old Indian shoes will not readily replace it by one of a modern type. It takes time to persuade cultivators to give up the old wooden cane-crushing machine and to adopt the new iron mill.

(b) **IGNORANCE OF THE CONDITIONS OF THE MARKET.** The Indian cultivator, who does not know perhaps which quality of cotton will fetch the best price in the market, may lose as a result of his ignorance. Many cultivators in the villages sell their crops to the more shrewd *Mahajan* at very low prices because they do not know the conditions of the market as he does.

(c) **IMMOBILITY OF LABOUR AND CAPITAL.** It is not easy for a weaver to become a carpenter, or for a labourer to leave his home and family and move to a country where wages are higher. Capital may be sunk in specialized machinery; it may, for example, be almost impossible to convert a spinning factory into a paper mill.

(d) **LARGE FIXED CAPITAL.** A capable organizer may be prevented from starting an enterprise merely by the difficulty and risk involved in obtaining and investing a large amount of initial capital in an industrial undertaking; those who are ahead of him in the business may have obtained a good lead.

(e) **MONOPOLY.** Competition may be negated because, for some reason or other, one producer obtains control of the entire supply.

Market Value.

We have seen that division of labour implies a market and exchanges in that market; also that competition is the force that helps to regulate the terms and conditions of exchange. But we have to consider on what terms these exchanges will be effected? How much must a man give of

his own goods in order to obtain a certain definite quantity and quality of the goods of others? How much of these can be obtained in exchange for a certain amount of his own? Here the theory of value comes in, because the value of a man's production and possessions is measured by the amount of the production or possessions of other people which can be obtained in exchange for them. Why is a coat exchanged for one, two or three caps? Several explanations have been attempted and these may now be discussed.

Labour Theory of Value.

It has been suggested that a coat exchanges for two caps because twice as much labour has been spent on the production of a coat as on a cap. This explanation is simple but one-sided. If a man spends a large amount of labour on a coat which does not fit the man for whom it is made, and who consequently will very likely not pay anything for it, then most of the labour may be wasted; ordinarily no one will pay for a thing which has no utility. Again, things such as diamonds, on which very little labour may have been spent, command a very high value in the market, as they are very attractive to most people and hence great importance and value is attached to them. For the same coat, one person may be prepared to give one cap, while another may be prepared to give as many as four caps; it all depends on the worth or utility of the coat to the intending purchasers.

Cost of Production Theory.

The above explanation does not serve the purpose even if, for the word labour, we substitute the words 'cost of production.' It is true that no one likes to part with a thing unless he obtains something in exchange, which in his eyes is at least equal in value to the trouble or expense he has had in producing the thing with which he parts; but above this limit it may exchange for different quantities of something else according to the

market value, *i. e.*, according to the demands and wishes of buyers and sellers at a particular time and place.

Marginal Utility Theory of Value.

Another explanation offered is that a commodity is exchanged for what it is considered to be worth. If a boy wishes to buy oranges, for example, and considers it worth while to purchase eight of them, he will pay for an orange an amount equal to the utility derived from the orange which he just considers it worth his while to purchase. But we have seen that marginal utility itself is a variable quantity. If there is a plentiful supply of oranges in the market and they are offered cheap, the purchaser may be prepared to buy more than if they are offered at a high price. A man may be prepared to pay as much as eight annas for an orange rather than go without it, but he may get one for two pice if there is a plentiful supply in the market. A purchaser may attach great importance to a "good" but the seller may be prepared to dispose of it readily and at a low price. In such a case the purchaser will not be prepared to pay a higher figure than at which he can obtain the particular commodity. Again such things as air and sunshine have great utility but usually no value, because they can be had free.

Supply and Demand Theory.

Value then is not determined solely by the importance of the "good" to the purchaser, nor by its cost of production to the seller; both these things have an influence on the determination of the value of a commodity. The cost of production determines how much is going to be placed on the market for sale at any given time, and the marginal utility determines how much demand there is for the commodity at the time. It is at the point where by competition, the quantity demanded at any point of time is just equal to the quantity supplied, that the value of any commodity

at that time is determined. Under conditions of free competition this is called its Market Value.

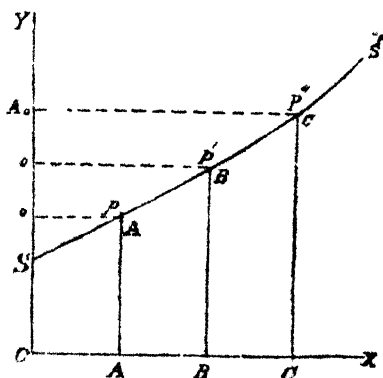
To understand what is the effect of Demand on price let us take the case of a commodity in which there is only one seller but several buyers, *i.e.*, where the supply is limited and the buyers are in competition with each other. The familiar case is that of an auction sale, where the seller will not part with the article at a price below what it has cost him to produce it, but above that point, if there are purchasers, he will try to make the largest profit and get the highest possible price. The rival purchasers will make bids for the property, according to their respective estimates of its utility to them, and it will be knocked down to the highest bidder. Here demand exercises a great influence on the determination of value.

To see the effect of supply on value let us take the case where there is only one buyer, but several competing sellers. A buyer may decide before going to the market that, whatever quantity he buys, he will in no case pay more than four annas for one orange, but when he reaches the market he finds that some sellers offer him an orange at two annas, others at six pice each and others at one anna each. The purchase will be made from the cheapest seller, provided he can supply all the oranges that the buyer desires. Supposing, however, the cheapest seller cannot satisfy the entire demand, then, in order to buy more, the purchaser will have to resort to the next seller who offers at six pice per orange. In a competitive market, if it is known that one seller can charge six pice for an orange, no one will sell below that price, as competition between the sellers will tend to fix the price at six pice per orange. In such a case the supply price of the {marginal seller has a greater influence than demand has on the selling price. The greater the demand for a commodity, the higher its price tends to be; the greater the supply, the lower the price. "If two persons run after a hen, the average share of each cannot be more than half of it,

but if one person runs after two hens then he can get both."

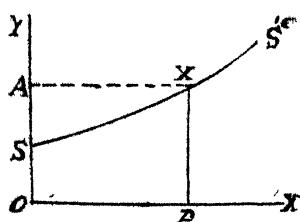
We may now study the influence of the Demand and Supply of a commodity in a market where there are several competing buyers and several competing sellers. In a previous chapter the Law of Demand was considered and the manner of representing the demand for any commodity in a market in any particular time. Now we have to consider how to represent the supply of any commodity in a market at any given time, *i.e.*, the quantity which is offered for sale at a given price at any particular moment. We have seen that, generally, the higher the price, the greater is the amount sellers are prepared to offer for sale, as in such a case it pays even the seller who has produced his stock at a higher cost than his competitors, to place it on the market. When, for instance, the price of wheat rises, it pays to bring into cultivation inferior lands, or to cultivate the existing land at a higher cost per unit of produce; *i.e.*, the margin of cultivation rises. On the other hand the lower the price of a commodity the less is the quantity that will be offered for sale.

This may be represented by taking the price of the units of a commodity along OY and the quantity offered for sale along OX.



At the price SO it may not pay to produce or offer it for sale, but as the price obtainable rises from SO to PA the quantity offered is extended from 0 to OA, and as the

price rises from PA to $P'B$ and to $P''C$ the quantity supplied is extended from OA to OB to OC respectively.

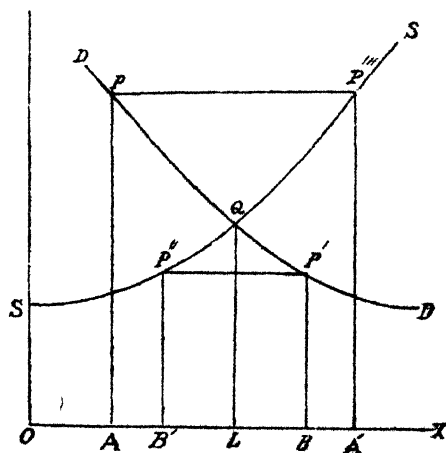


SS' is called the supply curve, any point on it will show the quantity supplied AX , at a given price PX . It should be noted that supply, like demand, is

always at a price, and it is meaningless to talk of supply without price, because supply simply means the quantity offered for sale at a given price.
Equilibrium of Supply and Demand.

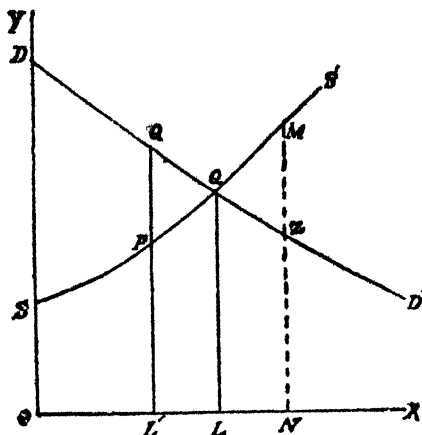
Having seen how to represent total demand for any commodity in the market at any given time and the total supply at the same-time, we can place the two together and find the point where they will be equal.

Let us represent the demand of the buyers for a commodity in the market at a particular time, with changing prices by the Demand Curve DD . As the price per unit falls from PA to $P'B$ the quantity demanded is extended from OA to OB . At the price $P''B'$ or $P'B$ the quantity offered will be only OB' .



As the price rises from $P''B'$ to $P''A'$ or PA the quantity supplied is much larger and is extended from OB' to OA' .

The two curves DD and SS intersect each other at the point Q . From Q if we draw a perpendicular QL on OX , then QL represents the price at which quantity offered for sale OL is just equal to the quantity demanded, *i.e.*, OL . Then QL is the market price of the commodity, *i.e.*, it is the price that will be determined by the competition of buyers and sellers and is called the equilibrium price.



At any other price say $Q'L'$ the quantity demanded is only OL' while the quantity supplied will be ON . As the quantity offered for sale is greater than the quantity demanded the tendency will be either for the price to fall, or the quantity supplied to be contracted. The market price of a commodity is thus determined by the interaction of the forces of demand and supply and it settles at the point where the whole of the supply is carried off by the whole of the demand in the market. It is the price at which the marginal demand price is just equal to the marginal supply price, and it measures at any given time the marginal utility of the commodity to those who are just induced to buy it, and also the cost of production to the marginal sellers.

Normal Value.

In the preceding paragraphs we have studied the determination of price, or value at any given point of time. We

have seen why the price of wheat on any day may be two rupees per maund or the price of milk purchased at any given time may be two annas a seer. We know, however, that the price of wheat is not always two rupees per maund, nor the price of milk always two annas a seer. The prices of commodities change from time to time and the value of a certain thing on any particular day may rise or fall for a variety of reasons, *e. g.*, because of a public festival or holiday, or it may vary with the psychology of the market *e. g.* rumours of true (or untrue) happenings may at once raise or lower the market price of the commodity. Such changes in price are very easily noticeable in the case of stocks and shares: a rumour that a company is running at a loss will at once affect the price of its stock or shares. Market price is very much like air temperature, which varies from time to time; it changes with the weather, it is affected by every cloud, by a gust of wind, or by rain.

But behind all this record of changes there is always a normal temperature at any given place, in any season to which it tends to return as the exceptional phase in the weather conditions has passed away. We often say that the normal temperature at Lahore in June is about 100°F. Similarly if the price of wheat has been in the neighbourhood of five rupees per maund for the last ten years, and then for some reason it falls below that figure we say that the price of wheat is abnormally low. When, therefore, we are talking of normal temperature, or normal value, we have in mind that temperature or value which will prevail in the long run, or that to which, after temporary variations, the temperature or value tends to return.

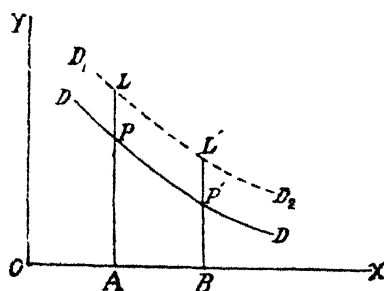
Periods of Time.

When we speak of normal price we do not mean a price at any particular moment, but a price during some period of time; but periods of time with reference to price may be either long or short, and we have to consider the changes in supply and demand during long and short

periods of time as these are often very different from each other. The potential demand for, and supply of, a commodity are fixed at any given time; it is true that demand and supply are extended or contracted with changes in price, but these are not permanent changes in demand and supply.

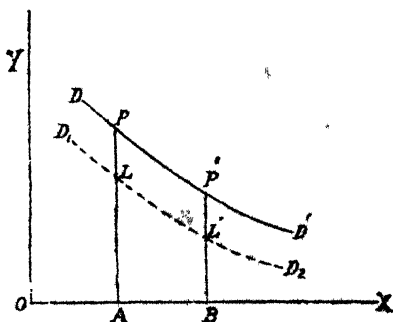
Permanent Changes in Demand.

Over a period of time permanent changes in demand may take place, as for instance, if the population of a country grows, its demand for grain will rise permanently. If a thing goes completely out of fashion the demand for it will fall permanently. Such changes in demand are not like the changes at one given time. When the demand for a commodity rises permanently the same quantity of the commodity which was previously saleable



at a particular price can be sold at a higher price if there has been no increase in the supply. Let us draw DD , the demand curve for a commodity to represent variations in demand with changes in price at a given time. If, owing to

the growth of population, the demand rises permanently, the quantity OA , which was formerly sold at the price AP , will now be sold at the price AL , and the other quantity OB , which was formerly sold at the price BP' , will now sell at BL' ; D_1D_2 will be the new demand.



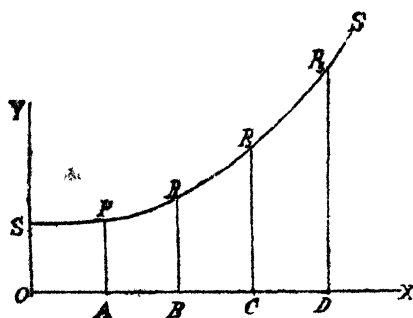
Similarly, if the demand falls permanently, the new demand curve D_1D_2 will be below the previous demand curve DD .

Changes in Supply.

Suppose that the demand for Indian wheat has risen permanently. To meet this increased demand there will be a tendency for the supply of wheat to be increased at the next harvest, as that is the time required to produce more wheat for the increased population. New land has to be brought under cultivation, more capital is employed and additional labour is required, in order to get more wheat out of each existing acre of land.

Long Period.

The period of time that will be necessary to get all the fresh material to adjust the supply to the changed demand is called the *long period*. When more of a thing has to be produced under conditions of (i) increasing costs, or (ii) diminishing costs or (iii) constant costs, then the long period supply curve of a commodity, produced under conditions of increasing cost, will be SS' as shown in the following figure :

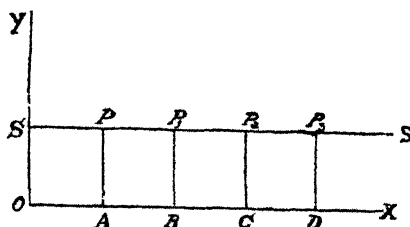
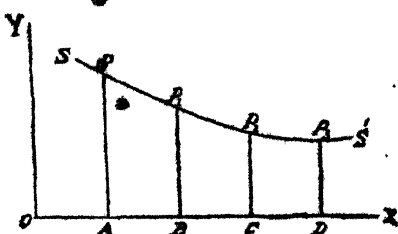


As the quantity produced is increased from OA to OB, to OC and to OD, respectively, the cost of production per unit rises from AP to BP₁, to CP₂ and DP₃, respectively. Note that in this curve, OX does not represent

the quantity supplied at a point of time, but what is produced within the time sufficient to allow of increased production, and OY does not represent the price of the commodity per unit, but the cost of production per unit.

The supply curve of a commodity produced

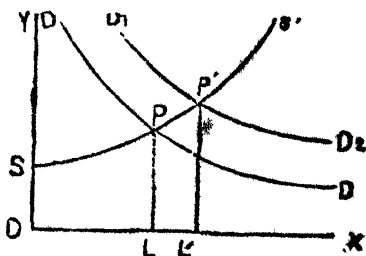
under conditions of diminishing cost will be as shown in the figure opposite and that of a commodity produced under constant cost will be SS' as in the figure below.



Long Period Price.

If it is felt that the demand for a commodity has risen permanently there will be a tendency to increase its production. As more and more is produced its price will have a tendency to come nearer the cost of production. Normal price is therefore more influenced by the cost of production than market price. At times market price may be high or low, but price must normally cover the marginal cost of production. The normal price of a commodity is that price which is sufficient to make it worth while for people to produce a certain quantity.

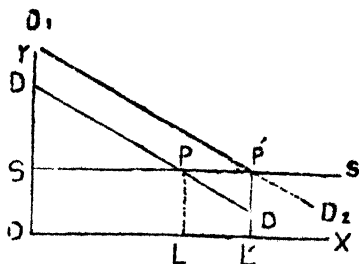
Let us first take the case of a commodity produced under conditions of increasing costs, say wheat. Suppose the demand for Indian wheat had risen owing to the linking up of India's markets with the world market, and to the growth of population in India. We represent the permanent rise in demand,



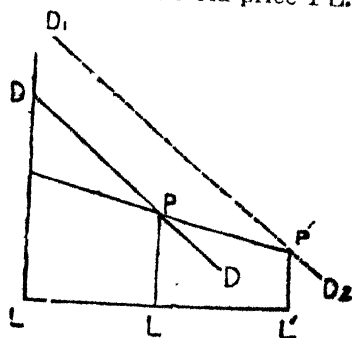
by the curve, D_1D_2 . The supply of wheat may be represented by the curve SS' and the old price before the rise in demand is represented by PL . More wheat has to be produced to meet the increased demand and, as more and more wheat is produced, inferior land has to be brought into cultivation or cultivated areas worked more intensively. As the margin of cultivation rises, the cost of production per unit of wheat increases, and hence the price will be higher in the long run than the old market price. In order to make it profitable to produce this new marginal unit of wheat, $P'L'$ the normal price must equal the new marginal supply price $P'L'$.

Next take the case of a commodity produced under conditions of constant costs.

In this case as demand for the commodity rises from DD to D_1D_2 , the increased demand would lead to increased production. But as each successive unit can be produced at the same price the long run price will not be affected. The new price $P'L'$ will equal the marginal cost of production $P'L'$, which is equal to the old price PL .



Lastly take the case of a commodity produced under the law of increasing returns or diminishing costs, say soap. As the demand increases from DD to D_1D_2 there will be a tendency towards increased production and as more soap is produced it becomes profitable to enlarge the scale of production and the cost per unit falls. The normal price $P'L'$ will now



be below the old market price. But there may be innumerable manufacturers of soap competing with one another in the market, and each of these industrial units will try to effect greater and greater economies, to enlarge the size of its business as far as possible, and to produce soap at the minimum cost per unit. In such a competing world the firms which produce at a high cost per unit will necessarily have to go out of the market in the long run. Those which can produce the cheapest will be better off in the race of competition, but they cannot determine the price because they may not be able to supply the whole of the demand. The price is therefore, determined in the long run by the representative firms which are neither very successful, nor very weak, but are average firms just able to earn a normal rate of profit.

Short Period Price.

Sometimes there is a sudden rise in demand as was experienced in the case of Indian cloth during the Great War. In order to take advantage of the increased demand, the mills began to produce more and more cloth and as at that time more mills could not be set up, or more machinery imported, or more labour and organization trained, all that could be done was to increase production as much as possible with the existing mills and machinery available. The mill-owners could employ more labourers, get additional coal and raw materials, work the mills double shifts and thus put an increased supply on the market. The price could not fall, however, to the level of the ultimate cost of production of cloth, because of the very heavy demand, and the mill owners thus earned exceptional profits. Price during short periods is called the *short period or sub-normal price*.

The *general rule* is that, the shorter the periods considered, the greater must be the share of attention which is given

to the influence of demand on value, and the longer the period, the more important will be the influence of cost of production on value, for the influence of changes in the cost of production usually takes a longer time to work itself out than does the influence of the changes in demand.

Monopoly Price.

Sometimes there is little or no competition in production, or supply, of a commodity. It may be that its production is naturally limited, as in the case of, say a natural spring, the water of which has certain medicinal properties; or it may be thought better for social, or political or other reasons, to regulate the supply, or production of say, opium or salt in India; or the production of a commodity may be under one single control because it is economical and profitable in the long run to produce it on a very large scale; e. g., carrying the mails in a country. In all these cases there is said to be a monopoly. Whenever the producer of any commodity or service is so able to regulate its supply as to control the market price effectively, he is said to hold a monopoly. Monopoly price cannot be determined in the same way as market price; nor is it determined in the long run by the marginal cost of production, for the monopolist may find it to his advantage to charge higher prices than the marginal cost. As the monopolist has a control over the supply he will naturally regulate the supply so as to get the maximum net profit; he will gauge the demand for his product, i. e., the quantity required at different prices. Suppose the manufacturer of a particular brand of soap holds a monopoly and estimates the demand and likely returns as follows :—

<i>Price per unit.</i>	<i>Quantity.</i>	<i>Total amount.</i>
		Rs.
Re. 1	500	500
As. 12	1,000	750
„ 8	10,000	5,000
„ 6	50,000	18,750
„ 4	60,000	15,000

With this idea of the demand he will calculate his cost of production of the different quantities, this will consist of fixed, and variable, costs, and for the above quantities these may be assumed to be :—

<i>Fixed costs.</i>	<i>Variable costs.</i>	<i>Total costs.</i>
	@ 2 as. per unit.	Rs.
200	Rs. 62-8-0	262-8-0
200	„ 125-0-0	325-0-0
200	„ 1,250-0-0	1,450-0-0
200	„ 6,250-0-0	6,450-0-0
200	„ 7,500-0-0	7,700-0-0

His net profits will be the difference between his total sale price and his total cost price which at the five given prices will be Rs. 237½, 425, 3,550, 12,300, and 7,300 respectively. So the monopolist earns the maximum net profits at the price of 6 annas per piece. This is the price he will fix in the absence of competition ; it is the monopoly price.

SUMMARY

Exchange is the act of giving up one thing for the purpose, or as a means, of getting another. A desire to exchange one's surplus product for those of others is natural and exchange has developed with the growth of civilization ; in fact it is the basis of economic progress. It is through this that the co-operation of men in production is secured.

Freedom of exchange implies competition. This does not necessarily mean unhealthy rivalry but it implies the existence of self-reliance, forethought, deliberate and free choice in modern business and industry.

Free competition may be hindered by (a) force of custom and habit, (b) ignorance of the conditions of the market, (c) immobility of labour and capital, (d) fixity of large capital in modern industrial concerns, and (e) existence of monopoly.

In the process of free exchange a value, or price, is set on every 'good.' The question arises, how is the price determined under conditions of freedom of exchange, or in an open market ?

Several answers have been given to this question. The labour theory of value suggests that the value of each 'good' is proportionate to the amount of labour spent on its production. The 'cost of production' theory further amplifies this by substituting the phrase 'cost of production' in the place of 'labour.' Both explanations are inadequate and one-sided, inasmuch as they do not take into consideration utility or demand, and they also overlook the fact that many things on which little labour has been spent fetch very high prices in the market, while several others, on which much labour has been spent, may command no value in exchange.

The Marginal Utility theory goes to the other extreme and suggests that the value of a 'good' is determined by its marginal utility. Price measures marginal utility, but that does not mean that price is also determined by marginal utility. Marginal utility itself is a function of supply; goods such as air have no marginal utility because they are abundant, i. e., their supply is large relatively to the demand.

It is neither Cost of Production, (Supply or Marginal Utility), nor Demand, which determines value, but the interaction of the forces of demand and supply. It is the price at which the quantity of a commodity supplied is just equal to the quantity demanded.

This, however, is true only at a given point of time in a competitive market. The supply of goods constantly tends to adjust itself to the demand and if sufficient time is allowed for this, then the tendency will be for the price to come down to the marginal cost of production. This is known as Normal Value.

Questions and Exercises.

1. Describe the kind of people among whom there is no exchange. Can you give any actual instance of such people? What are the stages in the development of exchange and how is it the basis of economic progress?
2. Show how the sphere of exchange of an Indian cultivator has grown wider and also the effect of this change on his economic, social and intellectual life. What are the causes of the change?
3. 'Competition is co-operation'—Explain.
4. Outline the advantages and disadvantages of Competition. What are the remedies for its evils?
5. How far is there true competition and freedom of exchange in Indian villages?
6. In what cases would you like to check freedom of exchange and by what means?
7. Name things which have (a) great utility but little value, (b) much labour spent on them but little or no value, (c) little utility but a high price; (d) little or no labour spent on them but a high price.
8. Value is determined by 'Supply and Demand.' Criticise.
9. What is Market Value and how is it determined? *P. U. 1934*
10. How does the Market Value differ from Normal Value? Show that although the immediate effect of a rise in demand will be a rise in price, the ultimate effect may be either a rise or fall.
(*P. U. 1934 and 1936*)

11. In what respect does Market Price differ from long period (normal) price. (P. U. 1938)

12. What is the difference between a rise or fall of demand and extension or contraction of it?

13. A has 10 oranges and B 10 apples. Under what circumstances and on what terms will there be an exchange between them?

A has ten oranges and B has fifty. On what terms will there be an exchange between them?

14. Before the railways came, mangoes used to be very cheap in some Indian towns where they are now very dear. Why is this so? Is the change beneficial to the people of the town or prejudicial to their interests?

15. Why do the prices of articles change from time to time? Give instances of commodities in which the price will tend to vary several times even in one day.

16. What are the factors which determine the Market Price of one of your text books? (P. U. 1937)

17. State briefly what you understand by (1) market (2) price (3) market price. Explain and illustrate the mutual relationship of demand, supply and price. (P. U. 1939)

18. Explain the following :—

(a) marginal utility is not fixed but varies with the price.

(b) the relative proportion of prime and supplementary costs are taken into account in deciding the policy of a firm in times of depression.

(c) other things being equal an increase of demand in the long period may or may not increase the long period price.

(P. U. 1939)

CHAPTER XVIII

INTERNATIONAL TRADE

International trade is the interchange of commodities and services carried on between persons living in different countries, or political territories. Thus trade between a person living in England and one living in France, or between some one living in India and another person in Germany, is international trade. Between people living in the Punjab and Bengal respectively, or between Bombay and Karachi merchants, trade (even though in this case the goods be carried in ships) is not international, but internal, or domestic trade. The latter is much greater in volume and value than international trade. It is frequently said that Great Britain lives on international trade but this is only about one-fourth in value of her total trade, India's internal trade is 2½ times her international trade. The *mechanism* of international trade differs from that of domestic trade and hence it has to be considered specially by students of Economics, even though the fundamental principles of the exchange of goods are the same in foreign as in home trade. International trade has assumed great importance only in modern times as a result of big improvement in the methods of communication and transport; it is simply a geographical division of labour.

From early times man has sought the product of near and distant countries; as long ago as 3000 B. C. India had trading connections with Babylon. Evidence is to be found of her trade relations with Egypt, Rome, China, Persia and Arabia. Early trade was in rare and costly commodities, but during the Mohammadan period India's trade was diverted chiefly toward, and carried on through, the North-West Frontier with Persia, Arabia and China.

With the discovery of the Cape Route to India in 1497-8, the era of modern trade began. Later the Dutch and English companies vied with each other in competing for the trade with India.

International Trade is not Trade between Governments.

To understand the true nature of international trade it should be clearly understood in the first place that it is the individual members of each nation who trade and not the governments of the different countries. Though we talk of Japan sending goods to India, and India sending goods to England, what really happens in such cases is that Indian merchants order goods from Japan and English merchants obtain goods from India. International trade is nothing but the aggregate of such transactions.

International Trade is Voluntary Exchange.

Another thing to be clearly grasped is that merchants in one country order goods from the people of another country *because they want them*; they prefer the goods to the money, just as is the case with a student buying sweetmeats from a shop near his hostel, or home. Watches are imported into India from Switzerland, machinery from England, glassware from Japan, because some people in India want these things. Merchants may advertise their goods to attract attention, but they cannot *force* their goods on the people of any country, any more than a local shopkeeper can compel a student to buy his sweets. Those goods are sent abroad which the merchants of other countries order, if the prices offered to them are more favourable than prices obtainable at home. International trade, like all exchange, implies *mutual consent and mutual gain*.

Like all trading it is in the last analysis, trade by barter; it is the exchange of commodities and services. The goods or services exported are the payments made

for the goods or services imported. Exports in the long run pay for imports; the money used is only the medium of exchange.

Why International Trade Differs from Home Trade.

If international exchange is so much like ordinary trade, then we may ask why should the conclusions which we reached about value in the previous chapter not apply to exchanges between people of different countries?

In all the arguments we used in explaining the determination of value it is taken for granted that capital and labour are easily and quickly moved, so that if the demand for any commodity rises, capital and labour will at once flow into production and leave those industries the demand for which is falling. It is also assumed that both buyers and sellers have full knowledge of what is going on, so that prices cannot for long remain higher in one place, nor the average rate of profits be higher in one industry, than in another. If Indian agriculturists could move as easily from India to America, Australia, and England as they can move within their own country, and a London banker could advance money as easily as an Indian money-lender can to an Indian peasant, then there would be little or no difference between home and foreign trade. But the form of government, the language, social customs and monetary systems of different countries are not the same; labour and capital do not move readily from one country to another. An American farmer may be earning large profits in agriculture but Indian or European peasants cannot go and compete with him freely and reduce his profits, because—

(i) It is difficult for people in any land to leave their homes, families, and children and go at great risk to a

country where people speak a different language, belong to another race, have other religious and social customs and different laws.

(ii) Many countries do not permit the free immigration of people from other lands.

(iii) Peasants have very little knowledge of conditions abroad.

Such difficulties are not experienced within a country, or at least not to the same extent, and thus labour and capital are more mobile at home. The values of things inside a country will, therefore, correspond in the long run with the expenses of production of those things. Between two countries, however, the competition being incomplete, and capital and labour fairly immobile, the value of a commodity imported into one country from another may be considerably above its cost of production.

Why International Trade Takes Place.

Why do the people of one country buy things from the inhabitants of another land, or how does the demand for the products of other countries arise?

(i) People of one country purchase those things from abroad which they cannot produce within their own land. European countries do not produce spices and their early traders imported them from the tropical countries. It was the quest for the "Spice Islands," which led to the discovery of the Cape Route to India. England does not produce rice, tea or coffee, and consequently she imports these things from other countries. India imports machinery and better quality of coal which are not produced at home.

(ii) Those things are also imported from abroad which the people can produce at home, but only with more difficulty, and at a greater expense than abroad. Matches

can be produced in India, but are imported from Sweden and Japan, because ordinarily they can be obtained at a less cost from those two countries than in India.

India can manufacture certain cotton fabrics as well as any other country, but it has been more to her relative advantage to produce raw cotton and other agricultural produce. The fact that it is more economical to confine attention to the making of fewer things than to try several things is as true of nations as of individuals. Two capable persons may both of them have the capacity in them to become as good doctors as lawyers, but it will benefit them, as well as the world in general, if one of them takes to medicine and the other to law. If both of them learn medicine as well as law, they will probably be like Jacks of all trades and masters of none. A girl may be as good a cook, but it may pay her to employ some one else to cook for her, even though she could cook better than the one she employs. International trade is only an international division of labour, and it is carried on like trading by barter. There are variations in the climatic conditions, properties of the soil and other natural resources, as well as in the quality and quantity of the labour power of different countries, and it is only by means of international trade that each country can contribute its best to the wealth of the world.

(iii) It may pay a country sometimes to import those commodities from outside, which it can produce not only with as little difficulty and expense as other countries, but even with less difficulty and expense than other countries. This will happen only when the importing country has a still greater advantage in the production of something else, or of several other things. Thus England can probably produce dairy products as well as any country in the world, yet she has a greater *comparative* benefit in confining herself to manufactures.

A doctor may be a better driver than his chauffeur, or a lawyer know much more about gardening than his *mali* but in each case it is profitable for them all to stick to their own jobs; total production will then be increased. It is all a question of the *comparative* output and the relative advantage which the doctor and the lawyer possess over their driver and *mali* respectively.

It is for precisely the same reasons that the people of one country buy goods from those of another. It is not necessarily because of any *actual* advantage in the production of one commodity over another.

The Theory of Comparative Costs.

We may now consider what determines how much a country will have to give for the products of another land. For the sake of convenience we will imagine that there are only two countries, A and B, both using wheat and cotton.

First case. Suppose A can only produce wheat and B only cotton. Here A has an advantage over B in the production of wheat and B has advantage over A in the production of cotton. There will be trade between A and B as it will pay A to get cotton for his surplus wheat. B will gain if he gets wheat for surplus cotton from A.

Second case Suppose both A and B can produce wheat only but no other commodity, but A has advantage in the production of wheat over B; then it would pay B to import wheat from A, but, because B has nothing to give in return except wheat, which A can produce at a lower cost, there would not be any trade between the two countries as although B would gain, A would lose.

Third case. Now suppose that both A and B can produce both the commodities, cotton and wheat. If A can produce both things twice as cheaply (that is with half as little labour and capital, as B, then in this case

also there will be no trade, because although B might consider it advantageous to import both wheat and cotton, she has nothing to give in return to A which A cannot produce cheaper at home ; nor can A derive an advantage by diverting labour and capital from one commodity to another, because a unit of labour and capital in that country produces the same relative advantage over B in both cotton and wheat.

Fourth case. Let us assume here that the country A has a greater advantage over B in the production of wheat than in cotton, although both countries produce both commodities. For example, while A can produce as much cotton per unit of labour and capital employed as B, it can produce more wheat per unit of labour and capital employed than B. Under such conditions it will pay A to withdraw units of labour and capital from the production of cotton and use them in the production of wheat, where A has a comparative advantage over B in production, or put it another way, B has a less relative disadvantage. It will therefore be to the mutual advantage of both countries if A confines itself to the production of wheat and B to production of cotton.

Fifth case. The same advantages will arise even though the country A produces both cotton and wheat cheaper than B, but has a greater relative advantage in production of wheat, *e.g.*, if a unit of labour and capital can produce say :

<i>Country</i>	<i>Cotton</i> Mds.	<i>or</i>	<i>Wheat</i> Mds.
A	20		40
B	10		10

If B were to devote two units to the production of cotton she could get as much cotton as A with one unit, but with two units of labour and capital she only gets half

as much wheat as A does with one unit. It would obviously be to B's advantage to get wheat from A, and to devote the two units for the production of a commodity which she can produce at relatively smaller disadvantage. Not only will it be to the advantage of B to confine itself to the production of cotton, but it will also be to the advantage of A to keep to wheat production, even though it can produce cotton cheaper than B. By keeping to wheat entirely, A can produce 80 maunds of wheat with two units of labour and capital, whereas if both commodities are produced by A only 20 maunds of cotton and 40 maunds of wheat can be secured. The 40 maunds of wheat can be produced by one unit, and instead of 20 maunds of cotton another 40 maunds of wheat could be produced ; in order to obtain 40 maunds of wheat, country B will be prepared to give anything up to 40 maunds of cotton because 10 maunds of cotton are equal to 10 maunds of wheat in A. In any case A can get more than 20 maunds of cotton from B so long as that country cannot produce more than 20 maunds at home with the one unit of labour and capital.

It will be advantageous for B to produce cotton only and to pay anywhere between 10 to 40 maunds of cotton for 40 maunds of wheat, and also it will pay A to keep to wheat production entirely and to pay between 20 to 40 maunds of wheat for 20 maunds of cotton. The ratio of exchange between the two countries will be somewhere between these limits. The value of cotton and wheat will be determined according to the relative eagerness of the buyers of A to get the produce of B, and the eagerness of the buyers of B to get the produce of A.

The total production of both countries will all be increased if A keeps entirely to the production of wheat and B entirely to cotton, as may be seen by the following

figures where A and B are each using two units of labour and capital.

Case	Country	Cotton	Wheat	Labour and Capital
				Units
I	A	20	40	2
	B	10	10	2
		—	—	—
	Total	30	50	4
II	A	40	...	2
	B	..	20	2
		—	—	—
	Total	40	20	4
III	A	...	80	2
	B	20	...	2
		—	—	—
	Total	20	80	4

Obviously in the last case the total production is largest, since for the 10 maunds less of cotton produced, there is an additional 40 maunds of wheat, *i. e.*, for the saving of one unit of B's labour and capital, there is a gain in total production of three units; or, in the case of A, for half a unit of productive capacity, three quarters of a unit of production is gained.*

This is known as the Theory of Comparative Costs and may be stated in the words of Geary as follows. "International trade does not depend upon differences of *absolute* costs but of *comparative* costs of producing the commodities exchanged. Goods may be profitably sent from places where they cost more labour, to places where they cost less labour, on the one condition that a still greater difference in labour cost exists as to other things which the first country desires."

The ratio of international exchange between two countries is thus determined between the limits set by

comparative costs of the commodities exchanged by the relative intensity of their reciprocal demands.

India's Foreign Trade.

Growth. During the last hundred years international trade has grown enormously, and with it the foreign trade of India. In 1849 India's exports of merchandise were worth only £16 millions and in this small total the main components and their proportions were :—

Commodities.	Percentage.
Opium ...	36
Indigo ...	13
Sugar and candy ...	11½
Cotton ...	11
Silk ...	6½

Cotton alone out of all this list survives to-day as an important export. The rest, which in 1849 formed nearly 70 per cent of the total, have practically dropped out altogether. The construction of roads and railways, the opening of the Suez Canal in 1869, (which has greatly shortened the distance between Europe and India), the construction of steamships, increased commercial and political security and stability, development of credit and banking, construction of great irrigation works, and the general development of the productive resources of India, as well as of the other countries of the world have all helped to swell the volume of India's foreign trade, the total of which in 1864 was less than 85 crores of rupees. It rose to 427 crores, before the Great War and was more than 600 crores, in 1928-29. Sir George Schuster gives a sketch of the development of Indian foreign trade from 1856 to 1933 in the following table reproduced from a lecture delivered by him before the Royal Society of Arts :—

	1856		1865		1870	
	£ Million	per cent.	£ Million	per cent.	£ Million	per cent.
<i>Imports :—</i>						
Food, drink and tobacco.	1 705	12'0	3'385	11'5	3'480	10'5
Raw materials.	'296	2'0	1'182	'4	1'585	4'5
Manufactures.	12'195	36'0	24'914	81'5	28'283	85'0
<i>Manufactures except cotton, iron and steel.</i>	5'876	39'0	9 681	32'5	8'325	25'0
Total Imports.	14'194	...	29'599	...	38'348	...
Main items of Imports.						
Sugar.	...	...	'563	...	'556	...
Oils.	...	...	...	...	...	...
Raw cotton.	...	...	...	...	...	...
Cotton.	..	...	13' 810	...	19'045	...
Metals and manufactures.	...	...	3'043	...	2'714	...
Machinery.	..	...	'586	...	'447	...
Chemicals, drugs and medi- cines.	...	...	'072	...	'240	...
Dyes and colours.	...	...	'064	...	'141	...
<i>Exports :—</i>						
Food, drink and tobacco.	4 769	18'5	6'805	10'5	7'025	12'5
<i>Food, drink and tobacco, excluding tea.</i>	4 769	18'5	6'805	10'5	5'886	12'5
Raw materials.	5'351	21'0	41'920	64'0	30'958	56'0
Manufacturers.	10'589	42'0	15'423	23'5	16'215	29'5
Living animals and postal articles.						
Total exports	... 25 338	...	65'491	...	55'332	...
Main items of Exports.						
Jute (raw and manufactured.)	...	...	1'083	...	2'920	...
Opium.	7'056	...	11'128	...	10'784	...
Indigo.	1'939	...	1'861	...	3'192	...
Raw cotton.	1'437	...	35'587	...	19'461	...
Tea.	...	...	'310	...	1'139	...
Hides and skins.	...	...	'610	...	2'021	...
Seeds.	...	...	1'750	...	3'522	...
Cotton manufactures.	1 732	...	1'410	...
Wheat, flour, and other grains and pulses.	5'248	...	4'469	...

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The exports of merchandise have further advanced from about 16½ crores in 29-6 to 202 crores in 1936-37.

1880		1890		1900		1909-14 Average		1919-24 Average		1933	
Rs. Crores.	per cent.	Rs. Crores.	per cent.	Rs. Crores.	per cent.	Rs. Crores.	per cent.	Rs. Crores.	per cent.	Rs. Crores.	per cent.
5'604	11'0	7'070	10'0	8'404	16'0	21'89	15'0	37'82	15'0	12'21	10'5
3'010	6'0	5'602	8'0	3'990	7'5	10'08	7'0	19'01	7'5	15'22	13'5
41'694	83'0	56'362	82'0	38'458	76'5	111'79	76'5	192'56	76'0	85'20	74'0
11'418	22'0	22'319	32'0	15'420	30'0	48'48	83'0	100'41	39'0	60'56	52'5
50'308	...	69'034	...	50'582	...	145'84	...	254'04	...	115'32	...
1'611		3'400		3'770		13'17		19'99		2'71	
'529		2'624		2'555		3'95		8'28		6'75	
...		195		467		1'03		2'01		3'55	
26'610		31'010		19'890		52'18		71'15		17'84	
3'780		5'646		4'287		15'74		27'79		9'47	
'770		2'064		1'505		5'80		22'76		13'38	
'327		'833		779		2'12		4'14		4'97	
'220				'451		2'06		4'39		3'45	
8'432	25'5	28'549	29'6	17'855	25'5	62'96	29'0	59'63	21'0	36'02	24'7
15'333	21'0	23'345	24'0	11'588	16'5	48'89	23'0	38'71	13'5	16'18	11'8
31'024	43'0	13'122	45'0	89'718	43'0	104'66	48'0	145'90	51'0	68'95	47'0
22'773	31'0	25'811	26'9	20'810	30'0	50'61	23'0	77'96	27'0	39'90	27'3
71'947	...	95'90	...	69'440	...	0'26	...	2'83	...	1'45	...
						219'42		286'33		146'31	
5'065		10'084		12'488		42'44		62'68		32'31	
18'600		9'261		6'303		9'96		2'33		'72	
3'571		3'073		1'421		'30		'53		...	
13'242		16'534		6'751		33'28		65'62		26'98	
3'099		5'504		6'367		13'07		20'92		19'84	
3'725		4'699		7'656		14'61		15'70		10'08	
6'392		9'346		6'012		24'37		23'53		13'69	
3'108		9'497		4'632		11'40		17'07		2'77	
12'712		19'461		9'344		45'81		32'82		11'74	

The following tables give the value of the principal articles imported into, and exported from British India from 1936-37 to 1938-39, and the last column shows the proportionate importance of each class of goods :—

Imports

(in Thousands of Rupees)

	1936-7.	1937-8.	1938-9.	Percentage on total of imports of Merchandise in 1938-39.
Cotton and Cotton Goods.	21,44,91	27,68,17	22,66,20	14'88
Machinery and mill work.	12,76,40	17,14,93	19,04,78	12'50
Oils.	16,15,81	18,69,99	15,62,41	10'26
Grain, Pulse and Flour.	14,18,63	12,16,85	13,76,46	9'04
Metals and Ores.	9,10,54	13,39,34	10,86,52	7'13
Vehicles	6,22,38	8,92,30	6,68,26	4'39
Instruments, apparatus and appliances.	4,97,36	6,13,36	5,85,27	3'84
Papers and pasteboard.	2,60,34	4,14,71	3,22,93	2'12
Dyeing and tanning sub- stances	3,06,86	3,94,06	3,11,20	2'05
Chemical.	2,54,37	3,32,82	3,05,29	2'01
Wood and timber.	2,48,79	2,98,26	2,86,69	1'88
Wool, raw & manufactured.	2,65,75	4,14,87	2,81,90	1'85
Spices.	1,90,53	1,82,83	2,63,43	1'73
Hard ware.	2,63,92	3,31,22	2,57,27	1'69
Provision and Oilman Stores.	2,27,29	2,60,32	2,48,41	1'63
Artificial Silk.	3,70,52	4,87,49	2,23,62	1'47
Drugs and Medicines.	1,98,32	2,36,17	2,20,53	1'45
Liquors.	2,14,64	2,30,34	2,10,83	1'38
Silk, Raw and Manufactured	2,38,01	2,85,58	1,94,15	1'27
Rubber Manufactures.	1,95,75	1,88,99	1,40,56	0'92
Fruits and Vegetables.	1,54,49	1,58,24	1,34,43	0'88
Glass and Glassware.	1,20,03	1,51,88	1,25,12	0'82
Precious stones and Pearls unset.	89,28	1,24,47	1,15,03	0'75
Manures.	79,26	79,67	1,05,17	0'69
Tobacco.	83,11	85,48	1,04,55	0'69
Tea chests.	56,26	71,70	90,80	0'59
Paints and Painter's Mate- rials.	91,85	1,01,86	88,99	0'58
Stationery.	69,38	81,02	67,04	0'44
Misc.	170530	205166	68643	11'07
Total ...	141,70,08	173,78,57	152,32,77	100'00

Exports.

(in Thousands of Rupees)

	1936-7.	1937-8.	1938-9.	Percentage on total exports of Merchandise in 1938-39.
{ Jute, Raw.	14,77,10	14,71,90	13,39,67	8'22
{ Jute Manufactures.	29,10,40	29,07,76	26,26,11	16'22
{ Cotton, Raw and Waste.	43,93,25	29,77,26	24,66,65	15'14
{ Cotton Manufactures.	7,02,30	9,29,30	7,11,79	4'37
Tea.	20,21,83	24,38,69	23,42,47	14'38
Seeds.	18,59,54	14,18,65	15,09,22	9'26
Grain, Pulse and Flour.	6,56,97	9,48,89	7,74,12	4'75
Leather.	7,44,37	7,25,42	5,27,58	3'24
Metals and ores.	3,67,61	6,12,60	4,91,02	3'01
Wool, raw and manu- factured.	3,76,00	3,72,37	3,84,95	2'36
Hides and skins, raw.	4,27,67	5,04,10	3,84,67	2'36
Oilcakes.	1,85,71	2,42,58	3,01,20	1'85
Tobacco.	1,76,52	1,99,61	2,75,63	1'69
Fruits and Vegetables.	1,97,13	2,08,19	2,26,86	1'39
Coal and Coke.	62,98	98,97	1,36,25	0'84
Lac	2,38,85	1,62,18	1,26,65	0'78
Mica.	94,06	1,48,40	1,14,12	0'70
Oils.	1,04,34	1,01,03	1,63,39	0'63
Coir.	77,54	1,04,44	69,01	0'59
Spices.	78,15	93,48	78,66	0'48
Coffee.	85,96	54,59	75,11	0'46
Hemp, raw.	69,27	74,50	71,98	0'44
Rubber, raw.	53,01	83,83	71,58	0'44
Fish (excluding canned fish).	68,71	69,08	69,29	0'43
Miscellaneous.	10,80,62	11,44,60	9,87,57	6'07
Total	185,04,93	180,92,42	162,92,55	100'00

Chief Imports.

Cotton. A glance at the table of imports will show that cotton and cotton goods form the largest class of goods imported into India. These come chiefly from Lancashire but much larger quantities have now begun to pour in from Japan, partly at the expense of Lancashire, but also, of other countries. The import of goods has been slightly on the decline for some years owing to the increase in the production of the Indian mills and to the disturbed political conditions.

Machinery and millwork. Next in importance to cotton goods are metals, machinery and mill-work. Of these, iron and steel manufactures form the major portion. Railway locomotive engines, tender and parts also form a good proportion. Imports of machinery, mill and railway stock have slightly increased during recent years. The import of other metals is less than a quarter of the iron and steel imported, and among them aluminium is the largest.

Oils. The imports of machinery and millworks are followed by various types of mineral oils. In 1938-39 438,711 gallons of oils were imported. Kerosene oil imported was 182,054 gallons, fuel oil 136,788 gallons, lubricating oil 32,761, benzine, benzol and petrol 85,821, paints 156 and others 1,131 gallons.

Motor Vehicles. In 1938-9 India imported 11,058 motor cars, 7808 motor omnibuses, vans and lorries, 1,371 motor cycles and 138,000 cycles.

Sugar. Imports of sugar occupied a place only next in importance to cotton goods a few years back, but now they have declined considerably, although they are still quite substantial. Most of the imported sugar comes from Java and Mauritius.

Other articles of importance are paper and pasteboard, chemicals and dyeing and tanning substances. Some raw

wool is obtained from Australia and silk from China, Japan, Italy and France.

Chief Exports.

Jute and Cotton. On the exports side jute and cotton are most important. In 1938-39, 690,000 tons of raw jute, 488,000 tons of sacking bags and cloth and 450,000 tons of heasian bags and cloth were exported. The consumption of raw jute in India is steadily increasing. Japan is the best customer of Indian cotton. Out of the total bales of cotton (2,703,000) exported, 45 per cent. (1,211,000 bales) were taken by Japan. The export of raw cotton is on the decline while consumption in Indian mills is increasing. It is estimated that the Indian mills absorbed 3,105,000 bales. Raw cotton is exported chiefly to Japan, Lancashire and other European countries*. Cotton goods go to Ceylon, Iran, the Straits Settlements, Malay States, Africa, the Phillipines, Iraq and Aden. Inspite of the fact that Cuba, the Netherlands, Germany, Roumania, Poland and Czechoslovakia raised the duties on jute sacks, and Ecuador prohibited the entry of jute sacks and gunny, the exports of raw, as well as manufactured jute have steadily increased. India exports jute to England, Germany, France, Belgium, Italy, Spain, Australia, Russia, America, Egypt. China and Japan, England and Germany are the chief purchasers of Indian jute.

Tea. The total production of tea in India in 1938-39 was 453 million lbs., Assam contributed 58 per cent. Northern India 25 per cent., and Southern India 17 per cent. About 350 million lbs. (or 77% of production) were exported. United Kingdom took 305 million lbs., Canada 15.3 million and U. S. A. 8 millions. The scheme for the International control of tea exports was

* In 1935-36 Japan's share of the total was 52 per cent. Lancashire's share 13 per cent, and other European countries about 25 per cent.

extended upto March 4, 1943 and the Indian Tea Control Act was passed by the Indian Legislature to regulate the production and marketing of tea. The export quota for 1938-39 was 92½ per cent.

Oilseeds. Oilseeds are mostly sent to European countries and export has increased owing to the steady development of the trade in groundnuts and the recovery made by Indian linseed. There is a difference of opinion about the desirability of exporting a large quantity of Indian oil-seeds. Many people consider this to be a loss to the country and say that the seed should be crushed in the country and only the surplus oil exported.

They give the following reasons to support their argument :

(a) The cakes would be largely retained in the country to be utilized for feeding and manuring.

(b) The profits of the industry might be secured for India and the industry would provide employment here.

(c) By crushing the seed, fresh and better oils could be produced.

The arguments put forward in favour of export of oil-seeds are :—

(a) India is pre-eminently an agricultural country, and it would be better to give attention to the development of agriculture with a view to increase the yield and export of raw material, rather than to attempt to start too many industries.

(b) Even if an oil-seed crushing industry were established on a large scale in India, the farmers would not readily take cake as manure, and consequently Indian agriculture would not benefit.

(c) India already exports some oil and cake, and this indicates that her actual requirements for these are adequately met.

(d) It would take a long time before India could produce refined oils of the kind demanded in Europe, and the industry could not, therefore, flourish.

(e) It is easier to export seeds than oil.

The two different opinions and the arguments advanced have been expressed above, and it is hardly possible for anyone to make a definite statement at present as to which procedure would prove to be more economical. If the necessary conditions for the success of the oil-seed crushing industry become available, it will no doubt flourish in the country. In some parts of India already several mills are being fitted with modern machinery, and the number of well-equipped oil-mills is on the increase. In Burma, (a foreign country now) the development of the crushing industry on up-to-date lines has been taken up by European agencies. As India develops her manufacturing industries the demand for oils of all kinds will surely increase.

Foodstuffs. Rice is the most important in this group. It is, however, re-exported. In 1938-9 the production was 23,577,000 tons, imports 13,66,000 tons and exports 285,000 tons. Rice is chiefly exported to Ceylone, Arabia and African territories, where a large Indian population resides. Wheat comes next and is exported from the Punjab and the United Provinces (to Great Britain chiefly) but the exports have declined slightly in recent years.

Hides and Skins. The export of both raw and tanned hides and skins has grown steadily; they are mostly sent to Germany, Italy, Australia, France, and the U. S. A. The most important category for exported raw hides was cow-hide.

Wool. Almost all the raw wool produced in India is exported to Great Britain.

Direction of India's Trade.

Of the imports into India in 1938-9, 30·5 per cent. in value came from the United Kingdom, about 16 per cent. from Burma 10·1 per cent, from Japan and 8·5 per cent. from the United States of America. In the year 1913-14 the share of United Kingdom was 64·1 per cent. and Japan and United States of America had only about 2 per cent. each, but since the Great War the share of the United Kingdom has decreased considerably owing to the cessation of imports during the War, and later, to the increased competition of the home manufacturers and of Germany, Japan and the U. S. A. These have all good commercial organizations for pushing trade in India, and they have become formidable competitors of England in the Indian market.

The exports are fairly well distributed, among a large number of countries, although the United Kingdom is still the largest single purchaser, as may be seen from the following percentages of the exports from India: 34 to United Kingdom, 9 to Japan, 8·5 to the United States of America, 6·2 to Burma, 5·1 to Germany, 3·8 to France and 3·1 to Ceylone.

Indian trade with the trans-frontier countries is still very meagre owing to the physical barriers and the economic backwardness of those countries. Wool, carpets, dried fruits, cotton, oil-seeds, glue, skins, and cattle are imported from Iran, Tibet and Afghanistan. The exports to these countries are cotton and wollen manufactures, spices and tobacco.

Balance of Trade.

The figures of India's import and export trade both of merchandise and treasure show that India's exports have in most years exceeded her imports. In 1913-14, the balance in favour of India was Rs. 42 crores; in 1933-34

it was Rs. 93 crores ; 1934-5 Rs. 76 crores ; in 1935-6 Rs. 67 crores ; in 1936-7 Rs. 92 crores ; in 1937-8 Rs. 16 crores and in 1938-9 Rs. 18 crores.

A country is said to have a "favourable" balance of trade when the exports exceed her imports, and an "unfavourable" balance when imports, exceed exports. In earlier days it was believed that a country which had an excess of exports was more prosperous, because then it had to import money or treasure. It is now generally accepted as true that international trade is an exchange of commodities and that the exports and imports will balance in the long run. The question is frequently asked "Why then is there almost a permanent balance of trade 'in favour' of India?" The answer is that India has to pay for the services of shippers, and foreign capital, for British soldiers and other expenses incurred on behalf of India by the British Government in England. These items are a part of India's trade, even if they are not recorded in the trade figures.

The main features of India's foreign trade may be summarised here.

1. Exports from India are almost always in excess of imports.

2. The trade with Great Britain is greater than that with any other single country.

3. The exports consist mostly of raw materials and food stuffs, and the imports of manufactured goods.

4. The great manufacturing countries of the world seek to enlarge their share of trade in India, because of the good market for cheap articles.

5. The trade is carried on in foreign vessels, mainly British.

6. Sea-borne foreign trade has increased so much that foreign trade over land is relatively negligible.

Where goods come from.

Trade of the Punjab with other Provinces by Rail and River in 1939-40 (in L,000).

No.	Articles with denomination.	1939-40		
		Exports.	Imports.	Balance.
1	Cattle (excluding sheep and Goats. Nos.	128	5	123
2	Horses, ponies and mules ..	6	1	5
3	Sheep and Goats ..	3	5	1
4	Other Cattle ..	5	5	3
5	Bones. Mds.	660	..	660
6	Cement ..	1,758	592	1,166
7	Coal and Coke ..	706	44,866	44,160
8	Coffee ..	...	1	1
9	Cotton twist and yarn (Foreign) ..	...	36	36
10	Cotton twist and yarn (Indian) ..	23	100	77
11	Cotton piece goods (Foreign) ..	...	156	155
12	" " " (Indian) ..	175	1,202	1027
13	Dyes and tans ..	2	3	...
14	Fruits, dried ..	106	345	239
15	Glass ..	11	186	175
16	Gram ..	1,362	376	987
17	Jawar and bajra ..	854	1,602	748
18	Rice ..	1,490	1,313	177
19	Wheat ..	13,523	79	13,444
20	Wheat flour ..	3,012	9	3003
21	Other grains and pulses ..	1,676	1,119	557
22	Hemp ..	13	128	116
23	Hides, raw ..	166	67	99
24	Skin, raw ..	113	41	73
25	Hides and skins (tanned and leather) ..	45	13	31
26	Jute, raw (loose) ..	1	1	...
27	" " (paccafales) ..	5	1	4
28	Gunny bags and cloth ..	82	499	417
29	Iron and steel bars etc. ..	391	3,009	2,619
30	Lac and shellac ..	3	3	...
31	Manganese ore ..	...	...	...

No.	Articles with denomination.	1939-40		
		Exports.	Imports.	Balance.
32	Oil cakes Mds	39	1,008	969
33	Kerosene oil "	95	779	683
34	Vegetable oil "	91	359	268
5	Castor oilseeds "	1	...	1
6	Cotton oilseeds "	808	236	572
7	Ground nuts "	17	61	44
8	Linseed "	2	5	3
9	Rape and mustard "	1,394	104	1,289
0	Til "	27	56	29
1	Ghee "	61	9	51
2	Salt "	1,946	312	1,634
3	Sugar "	63	3,624	3,561
4	Gur, rab and molasses etc. "	65	3,637	3,573
5	Tea "	48	139	91
6	Tobacco "	27	174	147
7	Teak wood "	...	52	51
8	Other wood and timber "	1,529	2,608	1,078
9	Wool "	193	90	103

Free Trade and Protection.

The theory of international trade propounded in this chapter shows the advantages which accrue to countries from trading with one another. Any restriction imposed on natural trade based on the principles of division of labour between the peoples of two countries will reduce the benefits of international trade. The capital and labour of a country, left to themselves will naturally flow to the most productive industries. The greatest benefit can be derived if the labour and capital are allowed to be applied solely to those industries in a country in which it has the greatest comparative advantage. On principle, therefore, there should be no impediments in the way of trade between nations. A nation is said to follow a policy of free trade when it does not impose any restrictions on its

foreign trade with the object of diverting the labour and capital of the country from one industry to another.

Protection is the imposition of duties on imports of foreign commodities in order to check or reduce foreign competition, with the object of giving the home producer an advantage over the foreign competitors, or the granting of bounties to home industries for their special encouragement. (The imposition of duties on imports for the purpose of revenue only is not Protection.)

Some of the arguments advanced in support of a free trade policy are :—

(i) That the consumer gains in being able to buy goods cheaply, with a great variety of choice in purchases. Against this it may be pointed out that cheapness is not necessarily an advantage, *e.g.*, in those cases where goods may have been produced under 'sweated' labour conditions, or where the home labour is unemployed as a result of the imports and has to be maintained at the expense of the community. A protective duty might permit of a greater increase in wages than the amount of increased cost to the consumer. Apart from such considerations as these, however, there does appear to be something fundamentally and inherently ridiculous in trying to prevent someone from selling us something cheaper than we can produce it ourselves, *i.e.*, with less expenditure of labour and capital.

(ii) Labour and capital should be employed to their best advantage, *i.e.*, so as to provide for their greatest marginal return; they should be allowed to move to where they can be best used. But this seems to pre-suppose a greater mobility of labour and capital than actually exist; much capital is fixed, and we have already discussed the general relative immobility of labour, and especially so far as its international migration is concerned. The transfer of capital frequently results in a dead loss as a results of

the movement, while the hardships arising from personal migrations are apparent, even when this results in an economic gain.

(iii) The general objection to government "interference" with any trading relations, *i.e.*, the old individualistic *laissez-faire* argument. Few people now-a-days, however, are prepared to subscribe to this doctrine in its entirety, and many who support it as a general principle are prepared to accept and adopt considerable modifications of it in practice.

(iv) The main argument which is put forward in support of Free Trade, is, however, based on the truth of the fundamental economic principles of :—

(a) Division of Labour.

(b) Comparative Costs.

The inherent economic soundness of these propositions can hardly be denied, in fact scarcely ~~any~~ one makes the attempt to refute them and so long as this is so, the economic case for Free Trade as a desirable policy must stand ; the attack against it has of necessity to be based on what has been called the "hideous doctrine of expediency." The opposition is usually driven back to a more or less apologetic attitude and the attack on the free trade position usually takes a form something like the following :—

Arguments for Protection.

(i) Although on principle it appears unjust, as well as unwise, to check or regulate the free course of trade between nations, it is argued that there are cases in which the free interplay of economic forces will not secure the best utilization of the resources of a particular country. In the first place, a fully developed industry in one country may be able, under conditions of free competition, to hinder the development of the same industry in another country possessing equal, or even greater advantages.

Thus, it is suggested that Bombay may have as great, or greater, natural advantages than Lancashire for the production of some kinds of mill cloth, but because of a later start, it may not be able to compete with Lancashire.

(ii) It is asserted that a country which is naturally suited to agriculture, may not be able to secure in full measure the benefits of what is called "modern civilization," if the people are confined entirely to agricultural work. In view of the example of comparative costs given earlier this argument is perhaps difficult to maintain on purely economic grounds.

(iii) "*Infant Industry.*" One of the most plausible arguments put forward for protection is in the case of newly established industries, or in the commencement of a new stage in a nation's industrial development and where it is claimed that a duty on the import of foreign goods will allow such "infant industries" to gain maturity; that they require nursing at first as they cannot manufacture as cheaply as the old established producers of other nations and therefore they require the fostering care of a protective duty to allow them to develop. When it is pointed out that there will very likely be a loss to the nation as a result of the rise of prices of protected goods, it is argued by those who favour a protective duty that such loss will only be temporary and that the nation will be a gainer in the long run by the development of its natural resources. The main objection to this policy is that the infant industry hardly ever admits to having grown up, e.g., the cotton mill industry in India is a fairly elderly "infant" now, (actually about eighty years old) and the millowners are still clamouring for higher duties. Protection seems to create "vested" interests which can be very damaging, not merely to the economic, but also to the political well-being of a country.

(iv) *Diversification of Industries.* It is claimed that

any excessive dependence of a country on agriculture (or on any one industry), tends to make it economically unstable. Agriculture is an industry subject to the law of diminishing returns and there is an ultimate limit to its growth. The people of a purely agricultural country may be a prey to famines if their transport facilities have not been developed. They lead a monotonous rural life and cannot enjoy the benefit of wider social intercourse; their outlook is generally narrow and restricted. If industries can develop near the source of raw materials they may be more remunerative and help to relieve the extra pressure of population on the land. The development of economically sound industries increases the production of wealth and enriches a country generally provides opportunities for investment of capital and stimulates ability and enterprise, solves the problem of agricultural poverty, provides a remedy for the periodical scourge of famine and raises the intellectual level of the people generally. Against this it may be argued that most, if not all, of these advantages could be secured without Protection if the outlook of people were international rather than national."✓

(v) All the protectionist arguments seem to presuppose some antagonism of interests among people, who although they may be only a mile away from each other, are living across different political frontiers. The assumption, either implied or stated, seems to be that a political division is of necessity a good economic frontier; but in this fashion, few people will agree with the assumption and it hardly seems to be necessary to emphasize its obvious fallacy.

(vi) Allied to these is the further argument advocated in support of Protection, *viz.* that each country should be self-sufficing in its economic organization and especially as regards certain fundamental needs such as food supplies;

otherwise it is placed at a serious disadvantage if it finds itself involved in a quarrel with another country, which dispute may lead to actual warfare. Hence each country must adopt a protective policy so as to maintain the home production of such essential military supplies (including food for its civil population) as will make it independent of foreign producers. Granting that wars will happen periodically for some time to come it must not be forgotten, however, that the policy of protection itself may be a form of economic warfare and very frequently tends to produce just those feelings of ill-will between nations that lead ultimately to the outbreak of hostilities.

Protection in India.

On the two grounds of (i) the nursing of the 'Infant' industries and (ii) the necessity for diverse industries in the country, the Indian Fiscal Committee of 1921-22, recommended the adoption of a policy of *Discriminating Protection* in India. It was to be given only to those industries which

- (i) possessed natural advantages.
- (ii) could not develop without the help of protection.
- (iii) would eventually be able to face world competition without protection.

In pursuance of the recommendations of this Committee, the Indian Tariff Board was appointed to examine the claims of industries which desired protection. The Board has gone carefully into these cases, and has, from time to time, made proposals to the Government of India regarding duties to be imposed on such goods as steel, leather paper, sugar, cotton, and some heavy chemicals. We have considered (Ch. XV ante), when studying some important Indian industries, what measure of protection has been granted by the Indian Government to these industries on the recommendations of the Tariff Board.

Imperial Preference.

After the Great War the desire, previously expressed, for the economic unification of the British Empire was intensified. Several conferences of the representatives of the various units of the Empire have been held and attempts made to develop a policy of Imperial Preference, under which the countries of the Empire should admit the goods of the others free, or with lower duties, while imposing protective tariffs on goods imported from countries outside the empire. The last attempt was made at the Ottawa Conference in 1932 and trade agreements were reached between the members of the Empire.

The Indian Tariffs (Ottawa Trade Agreement Amendment Act, 1932), was passed as a result of the Trade Agreement between the Government of India and his Majesty's Government in the United Kingdom. Hitherto the Indian Tariff was a single-decker one and did not differentiate between imports from different countries except in the case of certain protected classes of iron and steel goods and cotton piece-goods where higher rates of duty on goods manufactured in countries other than the United Kingdom were imposed. Under the Ottawa Trade Agreement, India for the first time departed from the previous tariff policy and adopted, on terms of reciprocity, tariff preferences for certain classes of goods produced or manufactured in the United Kingdom. The Agreement also provided for exchange of preference with the non self-governing Colonies and Protectorates.

On the part of India this Agreement involved the grant to the United Kingdom of a $7\frac{1}{2}$ per cent. tariff preference on certain classes of motor vehicles (motor cars and motor omnibuses, chassis for motor omnibuses, motor vans and motor lorries and parts and accessories thereof) and 10 per cent on the following classes of goods :—

Apparel (excluding hosiery and articles made of silk or artificial silk), certain arms and ammunition, asbestos manufactures, boots and shoes of leather, brushes and brooms, certain building and engineering materials, buttons, certain chemicals and chemical preparations excluding manures, cocoa and chocolate, confectionery, cordage and rope other than of jute and cotton, cork manufactures, cutlery, drugs and medicines except narcotics, earthenware and porcelain, furniture, and cabinet-ware, glue, hardware excluding electro-plated ware, instruments, apparatus and appliances and parts thereof (electrical, musical, photographic, scientific and philosophical, surgical, wireless and miscellaneous), leather and certain manufactures thereof, liquors (ale and beer, spirit in drugs, etc., and perfumed spirit), certain machinery and millwork, metals (aluminium, brass, bronze and similar alloys, copper, German silver, certain classes of iron and steel, lead wrought and zinc wrought or manufactured), oils (fish oil, certain essential oils, mineral lubricating oil, petroleum in paints, etc., and vegetable oils other than cocoanut, groundnut and linseed), oil cloth and floor cloth, engine and boiler packing, certain paints and painters' materials, certain classes of paper and pasteboard, certain kinds of provisions and oilman's store, rubber manufactures, smokers' requisites, toilet soap, stationery, textiles, (haberdashery and millinery) woollen manufactures other than blankets and rugs, toilet requisites, toys and requisites for games and sports, umbrellas and umbrella fittings, vehicles not mechanically propelled and cycles.

In most of these classes of goods the preference was subject to certain specified exceptions and also to the general reservation that it did not extend to commodities :—

- (a) to which protective duties are applicable ;
- (b) which were free of duty at that time ;
- (c) on which on grounds of national policy a specially low rate of duty had been imposed.

In the class of iron and steel goods, the preference extended only to those commodities which were not subject to protective duties, and in machinery only to those articles which paid the ordinary revenue rate of 25 per cent. *ad valorem* and not to those which in the interests of agricultural industries were free of duty or were subject only to the temporary duty of 10 per cent. *ad valorem*. In textiles it extended only to articles of apparel, haberdashery and millinery which were dutiable at 25 per cent. *ad valorem* and to woollen manufactures, with specified exceptions in each case.

As regards goods made of cotton, silk, or artificial silk, it was agreed that a 10 per cent. preference would be extended to these, with the exception of certain cotton manufactures (twist and yarn, piece goods, thread for sewing, blankets, handkerchiefs in the piece, hoisery, rope and towels in the piece), silk and artificial silk yarn, piece goods and thread for sewing certain goods of silk and artificial silk mixed with other materials (twist and yarn ; piecegoods and thread for sewing) and articles on which protective duties might be imposed as a result of the Indian Tariff Board's Inquiry which was being conducted at that time.

In the case of Colonies and Protectorates, the Agreement provided for the grant by India of preference to certain staple exports of the Colonial Empire including :— Specified gums and resins, oil-seeds, vegetable and essential oils, unground spices, cocoanuts and coconut products, fish, fruits and vegetables, sago and tapioca, tea, coffee, rum and unmanufactured tobacco.

A supplementary agreement regarding iron and steel was entered into between the two Governments in the following September which provided for the adjustment of the Indian import duty on galvanized sheets as shown below :—

Rs. 30 per ton on sheet iron made in the United Kingdom from Indian sheet bar.

Rs. 53 per ton on sheet iron made in the United Kingdom from other sheet bar.

Rs. 83 per ton on sheet iron not made in the United Kingdom.

These revised duties were to remain in force till the 31st March, 1934.

The above scheme of Imperial Preference was not to affect the protection enjoyed by certain Indian industries and was devised with a view to encouraging the extension and development of the export trade of India. It was revised from time to time by amending acts and supplementary agreements in the best interests of India and the Empire. The last supplementary agreement was made in January 1935, and under this the Indian Government was to give due weight to revenue considerations in fixing levels of import duties. Protection was given only to such industries in India as had established a claim to it after due inquiry by the Tariff Board and to such extent as to equate prices of imported goods to a fair selling price; a preferential rate of duty was imposed on goods from the United Kingdom. The British Government was to take steps to develop the export from India of raw and semi-manufactured material, cotton, iron etc. In April, 1936, the Indian Legislative Assembly urged for the immediate termination of the Ottawa Pact as it was working against the interests of Indian trade and industry. An assurance was held out by the Government later that

the old agreement would not be continued beyond the 31st March, 1939.

[New Indo-British Trade Agreement.]

A new agreement for three years has now been executed between India and the United Kingdom after two years of negotiation. Under the new agreement certain Ottawa preferences to British goods have been discontinued and there are now concessions for cotton exports from the United Kingdom. The salient features of the agreement are :—

(i) 82% of India's exports to United Kingdom are to enjoy preference while 16% only of India's imports from the United Kingdom are subject to preference.

(ii) Preference of 10% *ad valorem* is given to such important Indian commodities as castor seed, coir yarn, cotton yarn, goat skins and leather, linseed, oil-seed cakes, paraffin wax. Preference of 15% is given to non-essential vegetable oils and certain jute manufactures. 20% of *ad valorem* preference has been given to Indian coir mats, cotton and certain jute manufactures. Specific rates of preference are given to coffee, tea, rice, hand-made carpets. Lace, mica, raw jute and Indian hemp are to be imported free of duty into the United Kingdom.

India accords preference of 10% on cement, chemicals, drugs, paints, woollen carpets, sewing machines, wireless instruments and apparatus, cycles and photographic materials, 7½% on motor cars, motor cycles, and motor omnibuses and chassis. Spirits are also given some preference.

(iii) Reduction on duty on cotton piece goods imported in India from the United Kingdom. New rates called basic rates are imposed. Preference on printing goods is 17½% *ad valorem* ; 7½ pice per lb or 15% *ad valorem* which ever is higher on grev goods and 15% *ad valorem* on all

others. The duty is linked with the purchase of Indian cotton by the United Kingdom. The United Kingdom is to purchase 500 thousand bales in the year ending 31st March, 1939, 550 thousand bales in 1940 and 600 thousand bales in subsequent years. England is to export to India 425 million yards in a year with a maximum of 500 million yards. If purchases of cotton are less than the agreed figure preference has to be lowered according to certain rates and *vice versa*.

A Bill modelled on this agreement is now on the anvil of the Assembly.

Trade of India with the United Kingdom.

The course of international trade is affected by factors so numerous and so complex that the effect of a single factor like preferential tariff rates may easily be masked by other movements. It is, therefore, necessary to remember that, even in spite of the fullest statistical information, any judgment regarding the working of preferences is not likely to be more than a well informed and well-reasoned guess. The following indices show the relative volume of Indian trade with United Kingdom during the years 1931-32 to 1934-35.

Index of Exports to U. K.	1931-32	1932-33	1933-34	1934-35
In articles enjoying preference ..	100	89.3	109.5	110
In articles not enjoying preference ...	100	74.0	112.0	118.6
Index of Imports from U. K. ...				
In articles enjoying preference ..	100	105	118	134
In articles not enjoying preference ...	100	110.3	101.5	114.4

The increase in trade with the U. K. is due to certain broad changes that have recently come about in the world

distribution of trade, mainly owing to the currency and exchange policies of the different countries. The recent increase in the trade of India with the U. K. is not only to be attributed to any measures of trade policy but also to general trade movements brought about by other causes.*

SUMMARY

International trade is the interchange of commodities and services which is carried on between individuals living in different countries or states. It is not trade between governments but a voluntary exchange for their mutual advantage between people who live in different political units. It is, in its nature, trade by barter, because goods pay for goods.

There would be no necessity for a separate theory of international values if producers of a commodity in one country could compete freely with people living in another land. Because of the differences in national traditions, culture, currency systems, government and languages, the labour and capital of a country cannot move as easily outside a country as within its own political boundaries, and hence variations arise in comparative costs. These make it profitable for different countries to confine themselves to the production of those commodities in which they have the greatest comparative advantage.

The international division of labour arises, and through international trade countries not only interchange one another's special products, but each country makes the best use of its natural resources and contributes its best to the wealth of the world.

Thus gain is of course mutual and within the limits set by comparative costs, the values in international trade are determined by the relative intensity of the reciprocal demands of the countries entering into international trade: that country gains more which has the less pressing demand for the goods of the other.

The gains of international trade, however, tend to be offset by the imposition of protective duties or such taxes on imported goods as tend to divert a nation's capital from one channel to another. Though a policy of wholesale protection is inconceivable, discriminating protection may be justified as a strictly temporary measure in the interest of the development of particular industries on strictly national grounds.

Questions and Exercises.

1. What is a nation? Do political units differ from nations in the economic sense? How far is India an economic nation?

2. How does the trade between Karachi and Liverpool differ from that between Lahore and Karachi?

3. How are the international values determined? Why are they governed on different principles from home values?

*For the detailed study of the effects of the Ottawa Agreement the reader is referred to the Reports issued by the Government of India on the working of the scheme of the preferences for the years 1933-34 and 1934-35.

4. What does India gain by international trade? What is meant by saying that the balance of trade is generally "in favour of India?" What are the causes of this "favourable" balance?

5. Who carries on international trade and why?

6. Why, when and from where does India import the following commodities:—(a) wheat, (b) gold, (c) coal, (d) sugar, (e) cotton yarn, (f) cotton piecegoods (g) matches, and (h) glassware.

7. Supposing all the member countries of the British Empire were to give preference to each others' goods over those of outsiders, what would India gain or lose in such a scheme? Give reasons, for your conclusions

8. Show that it may pay a country to import even the commodities which can be produced cheaper at home from abroad.

9. What are the chief features of India's foreign trade?

10. How is the gain from international trade distributed between countries?

11. "Protection tends to offset the gains from international trade." How far is this true?

12. State the case for protection being granted to Indian industries generally.

13. What are infant industries? In what way is the cotton mill industry in India an infant industry?

14. What is Ottawa Trade Agreement, and what is the effect of this agreement on India's trade with the United Kingdom and other countries?

15. What is the effect of the Indo-Japanese Trade Agreement on the Indian cotton trade?

16. Is it true that England is being impoverished by her foreign trade with India, because her (England's) imports largely exceed her exports in value? Account for the excess in value of England's imports?
(P. U. 1934)

17. What are the advantages of foreign trade? Give illustrations in support of your answer.
(P. U. 1936)

18. What have you to say on the foreign trade of India? What conclusions would you draw regarding India's industrial position after reviewing her exports and imports?
(P. U. 1937)

19. Contrast the characteristics of the foreign trade of India with those of the foreign trade of England and account for the difference.
(P. U. 1939)

20. What are the chief advantages of unrestricted foreign trade in recent years
(P. U. 1938.)

CHAPTER XIX

THE MECHANISM OF EXCHANGE

Importance of Money.

We are all familiar with money because we handle it every day in the common business of life. With it we pay for the labour of workers and the produce of the field. Rupees, annas and pies buy the things we require, and most people think little more about it than that, but it is a subject on which a good deal of misapprehension exists, *e.g.*, many people still think that gold or silver coins are the only wealth. Large numbers of people in India are under the impression that the government is drawing away their wealth by giving them paper money instead of gold, hence they cling to coins and place them in their hoards. Again, although most people are probably quite familiar with the coins used in their own country, few know what will happen if the quantity of money in the country changes, and the quantity of goods and services, for which it is used in exchange, remain the same; people however realize the effect of the change in the different prices of goods.

We may now discuss the various economic problems that arise from the use of money, which plays such an important part as a medium of exchange in modern economic organization.

The mechanism of exchange is so highly developed, that even slight changes in the value of money, or in a monetary system, affect the trade and industry of countries very considerably. The violent changes in the currencies of the world during, and after, the Great War and even in recent years, illustrate how the prosperity of a country is bound up with its monetary system. The effect of the violent

fluctuations in the value of the German mark in 1922-23 on the economic conditions, not only of Germany, but on the rest of Europe, is a well-known example of the disastrous result of the breakdown of the monetary system of a country. But this importance of money should not lead us to think that money is the only real value, or the only wealth; on the other hand, it should be borne in mind that it is only a *measure* of value. It is for the economist, what the yardstick is for the cloth merchant, or the balance and weights are for the grocer. A rupee cannot be eaten or drunk, nor can it satisfy any want directly, unless perhaps the sheer love of possession. Its ownership indicates that its possessor has either received a gift, or rendered some service to the community, and has accepted this silver piece as a reward for such service. This "certificate printed on silver," which has the stamp of the reigning monarch on it, and which testifies to the fact, says tacitly, that the bearer of the rupee is entitled to it in payment for services whose value is measured by this rupee. The coin can be presented to any person who is prepared to offer his labour, or who offers to sell any commodity. It will purchase that amount of labour or goods, or any utility, which is measured by this "certificate." Thus a rupee, or any money, is merely a standard of value and not value in itself; the silver in it may be valuable, but a hundred-rupee paper note is of little value apart from its use as currency.

Exchange by Barter.

It will be realized, more readily perhaps, that money is only a measure of values if we remember that there was a time when people had wealth without having any money at all. This was under the system known as *barter*, where one commodity was exchanged for another directly, without the intervention of money. Even now in most Indian villages, exchange is to some extent carried on by barter;

payments to village *kamins* and field labourers are usually made in kind and not in cash.

Barter is inconvenient and cumbersome and therefore suitable only for primitive societies; it tends to foster slavery and economic dependence. The difficulties of its use may be seen if a simple illustration is taken such as, if a student who has no money, but other valuables, wants to secure a book for himself; then it is necessary, that

(i) He should search not only for a man who has that book, but also for one who wants to sell it.

(ii) Having found such a man, the student must possess, and be prepared to part with something which the book-owner wants in return for the book.

(iii) The thing which the student gives in return should, in his estimation, not be more valuable than the book; or if it has a greater value it should be so divisible that a portion of it should measure exactly the value of the book.

In another case, say of a young boy running away from home with no money but with ear-rings in his possession, he may be prepared to offer one earring for a meal or may he give his cap for a lift in a bus, provided he is assured that the meal, or the ride, is at least as valuable to him as his ear-rings or cap, and also if the bus-driver is desirous of possessing the ear-ring or the cap.

The second great difficulty experienced in a system of barter, is that of accommodating units of sale to units of purchase. There must be something that not only enables purchases for an exact value to be made, but which enables a common measure to be found for all kinds of commodities and services. The difficulties of the use of barter are summed up by economists who say that, for an exchange of goods to take place by means of barter, it is necessary to secure "a double coincidence of wants and possessions."

What is needed to obviate this difficulty is something that will give the power to command variety, to be able, without waste of time and without trouble, to give something in order to get what is wanted. There must be something that can be easily substituted for the "double coincidence of wants and possessions."

Emergence of Money.

Until such a thing is found, exchange is either impossible or extremely difficult, and frequently unfair and unjust. The difficulties of the barter system gave rise to the use of money; probably at a very early period in human history, men were obliged to fix upon some intermediate commodity, which would always be accepted in exchange for goods and services, and which would form a basis for the measurement and comparison of the values of other commodities. The article which in early times was generally acceptable was not always the same; sometimes it was a necessity of life, sometimes an ornament. Skins and furs were always in demand in a community of hunters; cattle were readily acceptable in the pastoral stage of development; oxen were used as money in ancient Greece; (the word 'pecuniary' is derived from the Greek 'Pecunia' meaning cattle); cowries or shells were used on the African coast, and also in India for small transactions until very recent times: grain still serves as money in some Indian villages and was "money" for a long time in Japan. The use of all these things was subject to many disadvantages; some were bulky, indivisible and inconvenient; others were perishable and not suitable for storing wealth for any length of time; *e.g.*, oxen might die or refuse to move, or they might cease to be generally acceptable. Gradually metals were found to be the most suitable and from a fairly early time they were used as money; they are now-a-days used almost all over the world.

Qualities of a Good Money.

In order to do the work of money really well the commodity chosen should have certain qualities.

(i) Acceptability. It should be generally acceptable, i.e., something which everyone will always accept.

(ii) Portability. Possess great value in small bulk, and be capable of being easily sent from one place to another so that even large values can be conveniently carried about.

(iii) Divisibility. It must be possible to cut any piece into equal pieces without affecting its value. (If an ox is cut into two pieces it loses much of its value and hence is not suitable for money.)

(iv) Homogeneity. All pieces of the same size into which it may be divided should be exactly similar to another in quality and therefore of the same value.

(v) Cognisability. Easily recognizable, so that it is not necessary to go to experts for a valuation each time it is offered in payment.

(vi) Durability. Sufficiently durable to be stored and preserved for an indefinite time without loss of bulk.

(vii) Stability. Its value should change as little as possible from time to time. Any one who accepts money one day should be reasonably sure that when he wishes to spend it later, it will buy as much in the way of goods or services as it did when he received the money. This is the most difficult quality to secure and monetary systems generally have been defective in this respect, nor has this difficulty been overcome as was witnessed by the fall in the general price levels in 1929-30.

Coinage.

If a village *bania* in the old days wished to buy salt from a distant place, he could not send grain, and therefore he obtained gold or silver in return for his grain and sent the metal in exchange for the salt. Generally there

were no accepted coins in those days, and gold and silver were either in lumps or bars, or in the form of jewellery. It was difficult to measure accurately a quantity of gold or silver in these terms. The man who was sending the metal had to weigh it carefully, and so had the receiver; this was very troublesome and disputes frequently arose as to the correct weight of the metal sent. In order to save people the time and trouble, and especially to prevent disputes, it became customary for the king or ruler of a country to have gold and silver cast into the form of small bars which were then stamped with his seal. These bars were of standard quality and weight, and could then be counted to assess the value of a consignment. Some people, however, would rub a little of the metal from the bars, while others began to make imitation bars; it was to prevent these malpractices that coins were first introduced.

The first idea was to make the gold and silver in square flat plates and to fix the seal on the whole face of the plate. Many of the Moghul coins, such as the Gorakhpuri pice, were square. Coins of this shape, however, tend to wear away at the corners and hence later, they were made round. One side of the coins, however, was still plain and as there was still the danger of 'rubbing', a design was stamped on both sides. These coins circulated for a long time, but it was still possible to cut off the edges of coins imperceptibly, and in order to protect the edges from this "clipping", the practice was introduced of "milling" the coins just as is done to the rupee in India to-day.

Functions of Money.

All these precautions are necessary if money is to fulfil its proper functions, and to do this it must be capable of acting as a :—

- (i) *Medium of Exchange* for bargains that are completed

immediately. It must be a 'currency,' i. e., something which can be carried by every one, and will pass freely from hand to hand, because its value can be read at a glance and hence is generally acceptable.

(ii) *Measure or Standard of Value.* Like the yardstick of the cloth merchant, which measures any kind of cloth, money must measure all commodities. This function has now become far more important than the one previously mentioned. Values can be measured in terms of gold, with or without using gold as a medium of exchange. "Money enables one to exercise power over the diverse products of the market." "Whoso hath sixpence is sovereign (to the length of sixpence) over all men; he commands cooks to feed him, philosophers to teach him, kings to mount guard over him to the length of six pence." The money we get enables us to enjoy an income at our discretion. We can generalise our consumption even though we may specialise in production; by so generalizing we get more satisfaction, just as by specializing we can give more *production*.

(iii) *Standard of Deferred Payments.* Money not only gives us the power to purchase anything we want *now*, but also to store up our value and thus also to purchase things in the future. It enables us to preserve value far more effectively than by building granaries and storing corn.

Growth of the Use of Money.

The use of money for settlement of obligations represents a great step forward from the old form of barter. When a country begins to get to the stage of a money, instead of what is called a natural economy, there is then some chance for it to make progress economically. The direct exchange of goods, for goods or for services, is cumbersome and unsatisfactory in every way, owing to the inability to secure that double coincidence of wants

and possessions mentioned above. Trade is possible without money, but in almost all communities a time has come when some common thing has been taken as the measure of value for all other things, and then later that has been used as a medium of exchange for those other things. Whatever has been used (and as we have seen, there have been all kinds of things used, such as skins, salt, shells, dried fish, tobacco and grain) that thing is called *money*. At a still later stage, the same thing came to be used as an accounting term, e.g. rupees, annas and pies in India or £. s. d. in England.

Definition of Money.

Money then is anything which is widely used and generally accepted as a medium of exchange. Paper notes or cheques, which themselves have no value except as money (if they are expressed in terms of the standard of value), are money because they are used and generally accepted as such ; anything which does the work of money is money.

Currency.

*Def
Currency*

The term currency is a little narrow in its meaning than the word money as it is applied only to that money which is issued by, or on behalf of a Government and which is accepted and used because of the authority behind it. The Indian currency system consists of notes of various denominations issued by the government of India—metallic rupees, eight, four two, and one-anna pieces, and pice, half pice and pies.

Names of coins used in different countries and their exchange ratios :—

Serial No.	Country	Currency	Normal & Sterling equivalents (Rs. 18'33).	Smaller coins.
1	Abyssinia.	Menelik.	10 Me =	1 Menelik = 16 Piastres = 32 Besa = 100 Centimes.
2	Afghanistan.	Afghani.		1 Afghani = 100 pals. 20 Afghanis = 1 Amana.
3	Arabia.	Indian silver coins.		100 Centavos = Gold Peso.
4	Argentine Republic.	Centavos.	500 centavos.	1 Schilling = 100 groschen.
5	Australia.	As Great Britain a	—25% discount.	1 Belga = 5 francs = 50 centimes.
6	Austria.	Schilling.	34'584 schilling.	Boliviano = 100 centavos.
7	Belgium.	Belga.	35 Belga.	1 M = 1,000 reis.
8	Bolivia.	Bolivianos.	13'83 Bolivianos.	...
9	Brazil.	Milreis.	8'89 M.	...
10	Br. East Africa.	Cents.	2,000 C.	1£ = 100 stotinkis.
11	Br. North Borneo.	Cents.	856 C.	1 D = 100 cents.
12	Bulgaria.	Leva.	412 leva.	Silver coins : rupee 50 cent. piece, 25 cent. piece and 10 cent. piece. Copper coins : 5 cent., 1 cent., 1/2 cent.
13	Canada.	Dollar.	4'87D.	1 P. = 100 Centavos.
14	Ceylon.	The rupee of British India.	India.	10 Cash = Candareen ; 10 Candareen = 1 Mace ; 10 Mace = 1 Tael.
15	Chile.	Pesos.	40 P.	1 P. = 100 centavos.
16	China.	Cash.	12'63 tael.	
17	Columbia.	Pesos	5 P.	

Table No.	Country.	Currency.	Normal £ Sterling equivalents (Rs 1 = '33)	Smaller coins.
18	Cuba.	As U. S. A.	4'87 D.	1 Peso = 100 cents.
19	Czechoslovakia.	Czech Crown.	118'50 Kc.	1 Czech crown = 100 hellers.
20	Denmark.	Krone.	18'11 K	1 K = 100 ores.
21	Ecuador.	Sucre.	24'3825 Sucre.	25 = Sucre = 1 condor.
22	Egypt.	Piastres.	97'5 P.	1 P. = 10 milliemcs. 20 P. = 1 Talari.
23	Estonia.	Estonian Kroon.	18'159 E. K.	1 E. K. = 100 Cents.
24	Finland.	Finnish Marks.	193'23 F. M.	...
25	France.	Francs & Centimes.	178 F 21 C.	1 F = 100 centimes.
26	Germany.	Marks.	20'43 M.	1 M = 100 pfennig.
27	Greece.	Drachma.	375 D.	1 D = 100 lepta.
28	Holland.	Florins	12 107 F.	1 F = 100 cent.
29	Hongkong.	Mexican or British dollars are in circulation.	...	...
30	Hungary.	Pengos.	17'18 P.	1 P = 100 fillcs.
31	Iceland.	Krona.	1 8159 K.	1 K = 100 auror.
32	Iran.	Rial	80 R.	1 R = 100 cents = 20 dinars.
33	Iraq.	Dinar.	1 D.	1 D = 1,000 fls.
34	Italy.	Lira.	92 4671'6 L.	1 L = 100 centesimi.
35	Japan.	Yen.	9 76 Y.	1 Y = 100 sen = 1,000 rin.
36	Java.	As Holland.	...	...
37	Latvia.	Lat.	25 22½ L.	1 L = 100 santims.
38	Lithuania.	Luta.	30 L	1 L = 100 centia.
39	Mexico.	Peso.	9 76 P.	1 P = 100 centavos.

	Country.	Currency.	Normal £ Sterling equivalents (Rs. 13'33)	Smaller coins.
40	Netherlands.	Florin.	12'107 F.	1 F = 100 cents.
41	New Zealand	As Great Britain—25% discount.		
42	Norway.	Krone.	18 159 K.	1 K = 100 ore.
43	Peru.	Sole.	17'38 S.	1 S = 10 dineros = 100 centavos.
44	Philippine Islands.	Peso.	9'6 P.	1 P = 50 U. S. Cents.
45	Poland.	Zloty.	43 38 Z.	1 Z = 100 grosz
46	Portugal.	Escudo.	1 E.	1 E = 100 centavos
47	Rumania.	Leu.	813 6 £ = £ 1.	1 £ = 100 bani.
48	Spain.	Peseta.	25'22½ P.	1 P = 100 centamos SP = Duro.
49	Straits Settlements.	S. S. dollar.	8'57 S. S. D.	1 S. S. D = 100 cents.
50	Sweden.	Krona	18 159 K.	1 K = 100 ore.
51	Switzerland.	Swiss Franc.	25'22½ S. F.	1 S. F. = 100 centimes
52	Turkey.	Piastre.	10199 P.	1 P. = 40 paras
53	U. S. S. R.	Roubles.	25 R.	1 Chervonetz = 10 Roubles = 1,000 kopeks.
54	United Kingdom.	Pound.	..	4 Farthings = 1 penny; 12 pence = 1 shilling; 20 shillings = £ 1.
55	U. S. A.	Dollar.	4'8665 D.	1 D = 100 cents.
56	Uruguay.	Peso.	6 14 P.	1 P = 100 centesimos.
57	Venezuela.	Bolivar.	25'2515 B.	1 B = 100 paras.
58	West Indies.	As U. S. A. coins.		
59	Yugoslavia.	Dinars.	276'316 D.	1 D = 100 paras.
60	Zanzibar	As British India.		

Kinds of money.

Money is usually either in the form of metal or paper.

(i) **METALLIC MONEY** includes :—

(a) Standard money, *i. e.*, which is freely coined by a government in unlimited quantities, as and when required. The factory in which coins are made is called a "Mint," where governments are usually prepared to receive metal at a fixed price to convert it into standard coins. The English sovereign weighs 123 274 grains and consists of gold 11/12ths fine, so that the weight of the pure metal in a sovereign is 113 0016 grains. Since there are 480 grains in one ounce, this can be converted into coin worth £3 17s. 10½d. The British Government used to be always prepared to purchase, through the Bank of England, an ounce of gold at £3. 17s. 10½d. This obligation to purchase gold was suspended on 21st September, 1931, in order to stop the heavy drain of gold from the country at that time. When a government is prepared to coin unlimited quantities of gold bullion into coins at a fixed price, standard coins cannot differ in price from bullion of the same metal, except by the cost of coining.

Mint Par. The standard coins of different countries may be compared in order to find out how many are made in each country out of a fixed amount of pure gold. As just mentioned, the British sovereign contains 113 0016 grains of pure gold ; the gold dollar of the U. S. A. contains 23 22 grains of pure gold ; thus £1 = 4 8667 dollars. This is called the mint par, or generally, the par of exchange between the standard coins of these two countries and there is a similar "par" between the currencies of any two nations.

Gold Standard. In nearly all countries of the world the standard coins contain a certain fixed quantity of gold and these are said, therefore, to have a gold standard in some form or another. There are certain other conditions neces-

sary, however, before a country can be said to be working on a proper metallic standard such as, *e. g.*, the unrestricted minting and export of the standard metal. Very few countries have had a full gold standard since the Great War. Even when the currency has been presumably on such a basis, very often it was really a gold bullion standard as in England from April, 1925, to September, 1931, when the Bank of England would buy or sell gold only in bars of approximately 400 ounces.

The silver rupee is the chief coin in India, but it is not a standard coin as the government does not undertake to convert silver bullion into rupees to an unlimited extent; nor is it prepared to convert into gold any number of rupees which may be brought to the mint. India has neither a gold nor a silver standard.

Gold Exchange Standard. Up to 1926, India had a system of currency known as a Gold Exchange Standard. The Government of India as a matter of administrative practice used to give pounds sterling in England in return for rupees tendered in India at a certain number of rupees per pound. This was done for the purpose of making payment abroad, and thus for foreign payments the rupee was generally convertible into pounds at fifteen rupees to the pound before the War, and at a variable amount later. Although this was known as a Gold Exchange Standard, it was really a sterling standard, because the pound sterling was the standard for purposes of foreign exchange; only when the pound was on a gold standard basis could the Indian currency be regarded as being on a Gold Exchange Standard.

Gold Bullion Exchange Standard. After 1926 the Government of India was prepared to go a step forward, and give gold bullion in quantities of about 400 ounces at the rate of 13'3 rupees to the pound sterling; it was also

prepared to take gold at that rate, and hence, if 20,8773. rupees were taken, 400 oz. of gold would be given in exchange. The rupee was made convertible into gold bullion at a fixed rate, with certain restrictions. Gold bullion was thus to be the standard, and this was convertible into rupees at a fixed rate in terms of British currency, which itself was on a gold bullion basis, i.e., it was a Gold Bullion Exchange Standard. The scheme has not come into operation, as in 1931 England went off the Gold Standard, and under the new Reserve Bank of India Act the rupee has been linked on to sterling. Under this Act the Reserve Bank is under a legal obligation to buy and sell sterling at rates between 1s. 6 $\frac{3}{4}$ d. and 1s. 6 $\frac{1}{2}$ d. in quantities of ten thousand pounds.

(b) TOKEN MONKEYS.

Token money, unlike standard money, circulates only by force of law and custom, it differs from standard money in two essential features. In the first place the market value of the metal in it is much less than its value in the currency, or the value at which it circulates, or the value at which the law says it shall be accepted by creditors in payment of debts. Secondly, the quantity coined and issued is strictly limited to the requirements of the country. As money is badly needed to effect exchanges, there is a great demand for it, anything which is acceptable as money will have value; this value can be regulated by controlling the supply. Token money is in use in all countries and, in those having a gold standard, the subsidiary coins are all token coins. Paper money is all token money, because the paper on which it is printed has practically no value of its own apart from the value at which it circulates as currency.

In India the rupee is 180 grains, or one tola, in weight; it contains 165 grains of pure silver and 15 grains

of alloy, and thus it is 11/12ths fine. The value of pure silver in a rupee has varied from 6 annas to 10 annas in recent years, but its face and legal value is 16 annas and thus the rupee is token coin. It may be regarded as a note printed on silver, and all subsidiary coins in India are also token coins ; in fact all Indian currency is token currency. As people in India began to hoard silver rupees on the outbreak of the War Government of India has issued rupee notes and new rupees with reduced silver contents.

Token coins cannot be used for making payments to foreigners, and the standard of international currency for the last fifty or sixty years has been gold. An American will not accept an Indian rupee in America because he has no use for rupees there ; he will demand American dollars, or gold by means of which he can get dollars. For the purpose of making payments to foreigners, the Government of India has, as we have said, converted rupees into sovereigns at certain number of pence per rupee. So long as the people feel that their rupee will be convertible into gold, the value of the rupee will remain fixed somewhere near 1s 6d. in terms of English currency. In India the rupee will circulate at its face value, no matter how much silver it contains, so long as people are sure that they can make all payments in rupees and compel people to accept them in discharge of all monetary obligations.

Legal Tender Money. This leads us to consider what is legal tender money. This may be said to be the money, which under the law of a country, a creditor is bound to accept in payment of his debt, or take the consequences of his refusal. If you purchase cloth and offer to pay in rupees the seller cannot refuse to accept them, e. g., he cannot say "pay me in gold." except at his own risk, as the rupee and the subsidiary coins are legal tender in India. Further, the rupee and eight-anna pieces are unlimited legal tender, which means that a

creditor is bound to accept them if tendered in discharge of a debt of any amount. The other subsidiary coins are limited legal tender, i. e., only to the extent of ten rupees; it is not sufficient to offer to pay a debt of twenty rupees by tendering 320 separate one anna pieces; the creditor would be within his rights in refusing to accept annas for any debt exceeding ten rupees.

(i) PAPER MONEY consists of —

(a) Currency notes, which are issued on the authority of a government; they are credit instruments circulating by virtue of the authority behind them. The 10,000, 1,000, 500, 100, 50, 10, 5 and one rupee notes and Bank of England notes are examples of paper currency.

(b) Other forms of paper money are cheques and bills exchange, or "Hundis", which have only a limited circulation. They are accepted only where people have confidence that they will be paid when due. *Hundis* have been readily accepted in India, because, according to the practice of merchants, they were rarely dishonoured. So also, cheques on a bank are accepted if the person to whom they are given is confident that the person who gives the cheque has money in the bank on which it is drawn and that the money will be paid when the cheque is presented for payment. Such payments by cheques have been very general in England for a long number of years, but in India and in many other countries, the cheque circulation is extremely limited.

Gresham's Law.

Most people, if they have a bright, new rupee fresh from the mint, and also another dirty, old rupee, will, in making a payment, keep the new and give the older rupee. So also, if coins in circulation become much reduced in weight by wear, or by fraudulent practices, there will be a tendency for users to retain the full weight

coins and to pass on those of lighter weight. In the case of standard coins, as soon as any coin becomes lighter than others, the tendency will be for full weight coins to be

- (i) melted.
- (ii) kept in hoards.
- (iii) sent in payment of debts abroad i.e., to go out of circulation.

The same thing will happen if the government of a country tries to circulate two standard coins, one of which contains less pure metal than the other. Only the inferior coins will remain in circulation and the better ones will pass into hoards, or will be melted or exported. Thus relatively bad money always drives out good* money from circulation, and this statement of a general tendency is known as Gresham's Law, after the name of a banker in England, who first formulated the rule over 300 years ago. It was well known, however, by bullion dealers long before his time,

Double and Single Standard.

The object of a system of currency is to provide a cheap and suitable medium of exchange. It should

- (i) provide a uniform standard for measuring
 - (a) all values in the country, just as the yard-stick provides a standard for measuring all lengths,
 - (b) currencies of other countries, i.e., secure a fixed mint par of exchange with other countries ;
- (ii) secure, as far as possible, a stable level of prices.

Gold Monometallism.

In former times, silver coins were the standard money almost all over the world, although gold was coined in many countries and gold coins were in circulation to a certain extent. Both gold and silver coins were in circulation in India before 1835 ; the gold *mohurs* were exchanged into silver rupees of different kinds, at rates which

varied from time to time. This led to much confusion, and the same conditions prevailed in Europe until a little over a century ago. In England the confusion was ended in the early years of the nineteenth century by the adoption of the single standard system and gold became the only standard for the coinage. Gold Monometallism, as it is called, was adopted in almost all the important countries of the world by the end of last century. China is perhaps the only large country which has retained a silver standard. It should be borne in mind that in most countries the actual circulating medium is usually paper, convertible into gold at a fixed rate, and the metal only performs the work of measuring the values. The uniform silver rupee was introduced into India by the East India Company in 1835 and up to 1893 there was free coinage of rupees in the silver standard which prevailed. When many European countries adopted the gold standard, silver became continually lower in value and the value of the Indian rupee gradually fell. To remedy this situation the Indian Government closed the mints to the free coinage of silver and the value of the rupee then began to rise. It was stabilized at 1s. 4d. in 1898 and the rupee became a token coin. By the device of using paper the use of gold in internal currency is avoided and great economy is effected, even though gold is the actual standard of value.

Gold Monometallism does fulfil in a large measure the tests of a good currency although it has come in for a good deal of criticism in recent years. The chief merits of a Gold Standard, when it is properly worked; are :—

(1) One simple uniform standard of measuring large and small values is provided.

(2) It secures a par of exchange with all the important

countries of the world when they are also on the same standard.

(3) Gold being more stable in value than other metals and the supplies being regular, it ensures stability of values more than any other metal, although it should not be forgotten that no such thing as actual stability has ever been secured; it is only relative stability that has been achieved.

Bimetallism.

In this system two metals (usually gold and silver) are standard coins and the coinage of both is free and unlimited, Coins of both metals are also unlimited legal tender and the coins of one metal are exchangeable or convertible into those of the other at a fixed ratio. The trouble with this system is the one previously mentioned, viz, that if one metal becomes cheaper than the other, the coins of the dearer metal go out of circulation under the operation of Gresham's Law; it is very difficult to maintain a fixed ratio between the two metals for any length of time.

Paper Currency.

(1) CONVERTIBLE PAPER From very ancient times it has been found that various things can be used to represent coins, either by a custom growing up among the people themselves; or by the ruler proclaiming a law to that effect. Paper money is very convenient and safe, and the idea of keeping metals and giving papers as a token originated long ago. The Chinese were the first to use paper to represent money and in many countries small pieces of leather were used before paper.

In India, though Hundis were in use from very early times, paper currency was practically unknown before the British rule. Now currency is issued in the form of printed notes containing a promise to pay on demand the sum of money mentioned on the face. In many countries banks

are allowed to issue such notes under Government regulation, but the privileges are gradually being withdrawn, except for more or less public institutions, and even for them only under an increasing degree of State control. In India the three Presidency Banks of Bombay, Bengal and Madras were formerly permitted to issue notes but as these notes never became popular, the privilege was withdrawn. In 1861 the Government began to issue paper currency notes in India, and since then their circulation has increased enormously. In 1865, the total circulation was 7 crores of rupees; in 1915, it rose to 61'6, in 1920, to 174 and in January 1938 to 214 crores. These notes are at any time convertible into rupees at their face value; any number of them for any amount may be presented at a Government Treasury Office when it is open for business and rupees obtained in return. It is because of the belief that they can any at time be converted into rupees that the notes can be kept in circulation along with the metallic rupees.

The chief merit of a paper currency is that it does the work of money better and cheaper than any other commodity. Why circulate gold when paper will just do as well?

But in order that people should have confidence that the notes will be converted into coins, the issuing authority must ensure their convertibility under all circumstances. This is done by having sufficient reserves of gold and silver always ready whenever a demand is made.

The Government of India keeps an equivalent number of silver rupees in reserve for every note issued, but a certain proportion of the rupees thus kept can be invested in securities. The permanent constitution of the Paper Currency Reserve provides for a holding of gold and

silver metallic reserve of not less than 50 per cent. of the total circulation and for the balance to be held in rupees and sterling securities.* In January, 1936, 27 per cent. of the reserve was invested. In India the position is somewhat anomalous, as the notes are convertible, not into gold or standard coins, but into rupees, which are themselves simply "notes printed on silver." The convertibility of the Indian paper currency notes is, therefore, likely to be endangered when the price of silver rises abnormally, as it did during the Post-War period. Further, large reserves of silver have to be maintained for ensuring the convertibility of the notes, this is useless for external purposes, as when it is most needed it is liable to prove incapable of realization. The Royal Commission on Indian Currency and Finance therefore proposed that all fresh notes issued in India should, like the rupees, be convertible.

(2) INCONVERTIBLE PAPER. There is always a danger that paper money may be issued in greater quantity than is required by the public. In time of need governments are tempted to set the printing press in motion and put notes into circulation in order to obtain money for their own payments; this is one way of indirectly taxing the people without their consent. The over-issue of notes leads to their depreciation; their real value falls below the face value and metallic coins begin to disappear from circulation. Gresham's Law comes into operation and the notes become inconvertible into metallic coins at their face value, as was the case with most of the European countries during the Great War. Austrian, German and Russian notes suffered enormous depreciation in value, with consequent loss and much suffering to the holders of such notes.

*In 1925 there were about 185·1 crores of silver coin and bullion in the Reserve.

THE VALUE OF MONEY

The phrase 'value of money' has two meanings. In its ordinary sense (with which we are not specially concerned), it means the value of the material of which money is made, *e. g.*, the value of the gold in a coinage, which will be determined just as the value of any other commodity, *i. e.*, by the equation of supply and demand. There is a demand for gold in currency, as well as a demand for it in the arts, and the total supply of gold at any time will be distributed among its various uses in such a way that the marginal utility of gold in each case will be equal. If then there is a greater demand for gold in the arts, its value for that purpose will be increased and it will flow from coinage into the arts, or if the conditions were reversed, *vice versa* ; just as water will flow from a higher to a lower level until the levels are equal.

Purchasing Power.

In its other and, for our purpose, more important sense, the phrase 'value of money' means the general purchasing power of a unit of money, *e. g.*, how much can a rupee buy at any given point of time of

(i) particular commodities such as wheat, labour, rice, gold, sweets, milk, sugar, *ghi*, or any other commodity which any particular individual or family purchases, or consumes ;

(ii) all goods conceived as a block of commodities.

The second is in reality the meaning of the phrase 'general purchasing power, but it is impossible to find such an ideal block of commodities, and so, for practical purposes, the phrase, 'general purchasing power of money,' has been defined as "the power which money has of purchasing commodities in a country or in any place,

in those proportions in which they are in fact consumed there."

This purchasing power of money, or the value of money, varies from time to time and from place to place. The things which a rich Londoner can buy cannot be had, say, by an African peasant, and many of the things which most people in India can have to-day could not have been had at any price, even by a Viceroy, hundred years ago. Again, a rupee buys wheat at different rates at various times.

Quantity Theory of Money.

These variations in the purchasing power of money depend upon a variety of circumstances and a study of these leads us to what is called the '*quantity theory of money*,' which is enunciated thus: "Other things being equal, and under the simplest conditions, the value of money tends to vary precisely in proportion to its quantity." To prove this proposition, let us assume a hypothetical market in which:—

- (i) There are only 100 oranges to be sold.
- (ii) These are all to be sold at once.
- (iii) There is free competition between buyers and sellers.
- (iv) There are only Rs. 10 with the purchasers, i. e., the quantity of money is fixed.
- (v) These rupees have no other use than to be used as money.
- (vi) The money changes hands only once, and all of it is paid immediately to effect one transaction only, i. e., the purchase of 100 oranges.

In such a hypothetical market, the price or value of each orange will be one-tenth of a rupee, or the purchasing power of one rupee is ten oranges.

Now, suppose that all the other five conditions mentioned remains the same, and only the fourth, *i. e.* the quantity of money alters: that the money in the pockets of the purchasers is doubled and instead of ten rupees there are twenty. Then since all other factors are the same and the twenty rupees have no other use than to effect that one transaction, the only result of a change in the quantity of money will be that where one rupee passed before, now two will pass; *i.e.*, that the 100 oranges will be one-fifth of a rupee, or the purchasing power of a rupee will be five oranges. In this case, the figure including the price level is doubled and the purchasing power of the rupee halved, as the quantity of money is doubled. Thus the proposition is established that the purchasing power or value of money tends to vary precisely (but inversely) in proportion to its quantity.

This proposition is not only true but is a truism. It merely states that if the quantity of money in circulation or its supply is doubled, while the demand for it remains the same, the value of money is halved.

Demand for Money.

The demand for money means the total number of exchanges which have to be effected in terms of money. Money as such, is not wanted for any other purpose than for the purchase of goods and services, and thus if one unit of money is an anna and a man spends one anna each on sugar, milk, or an orange his demand for annas will consist of as many annas as he wants to spend on the various commodities the units of which he purchases at one anna each. Taking P to be the price (one anna) of each article and Q_n to be the commodities purchased, the demand for money will be represented by Q_n . Thus Q_n represents the total number of commodities bought with money and is called the volume of trade. If we call it T , then $P \times T$ will represent

the total demand for money.

Supply of Money.

The supply of money means the total number of units of all kinds of the media of exchange, multiplied by the number of times each unit of money changes hands, which is called its rapidity, or velocity of circulation. Thus, if one anna changes hands only once, the supply of money is one \times one. Let M represent the total units of money in circulation and V its velocity of circulation, then $M \times V$ is the total supply of money.

Equation of Exchange.

The value of money varies inversely with its supply, and directly with its demand ; or in other words, the price level, P , varies directly as the supply of money and inversely with the volume of trade.

$$P = \frac{M \times V}{T}$$

$$\text{or } PT = MV.$$

Value of Money and the Value of other Commodities.

The chief difference between the determination of the value of money and the determination of the value of other commodities is that the value of money changes in exact proportion to the changes in demand and supply while in the case of other commodities there is no such agreement in proportion. This is because money as such is wanted for no other purpose but for effecting exchanges. If two annas purchase four oranges what is the value of an anna in terms of oranges? It must be two oranges. If two annas purchase eight oranges the value of an anna is then four oranges. As prices are nothing more than values expressed in money, they vary exactly in proportion to the quantity of money. An analogous case may be taken of a railway ticket which is desired for the sake of

the journey over which it gives control. If a railway adjusted the size of its tickets to the lengths of the journey indicated, a long ticket might be more desirable than a short one. But if the lengths of all the tickets were doubled, this increase would make no difference of their relative values. So, too, if the volume of currency in a country is doubled, the large quantity of money will now measure the same amount of commodities, and the value of each piece of the double quantity of money will become half of what it was before.

Quantity of Money Affects the General Price Level Only.

The above theory should not be taken to mean that whenever the quantity of metallic money in circulation is doubled the prices of all commodities are doubled. The demand for wheat may be rising while that for jawar may be falling, and yet the price of wheat may go on rising, while that for jawar is falling. These variations in prices will go on in the case of particular commodities irrespective of variations in the quantity of money, which only affects the general price level.

Effect of Credit and Barter

Further, it is not variations in metallic money alone that affect the price level. If the goods are exchanged without the intervention of money, *i.e.*, by credit or barter this will have the same effect as the existence of more money.

Rapidity of Circulation.

Again, if the quantity of money remains fixed, but owing, *e.g.*, to development of the means of transport, or the growth of banks, it will have the same effect as an increase in the quantity of money.

Volume of Trade.

On the other hand, even though the quantity of money and its value remain fixed, if the quantity of goods to be

exchanged with it increase, the price level will tend to fall.

Measurement of Changes in General Price Level.

The measurement of variations in the general price level is usually done by means of Index Numbers in the following manner. Some particular year, 1896, is taken as the starting point and is called the base year. The prices of given quantities of commodities which are chiefly consumed, say by most families in a country are taken in the proportions in which they are consumed and each is represented by the figure 100.

Consumption		Price		
		Rs.	a.	p.
One maund of wheat	...	1	0	0
„ „ „ rice	...	4	0	0
„ seer „ ghee	...	1	0	0
„ „ „ milk	...	0	2	0
„ „ „ salt	...	0	2	0
„ pair „ shoes	..	1	0	0
Four yards of cloth	.	2	0	0

As each of these seven articles is represented by the figure 100 the total will be 700, and the list then represents what is assumed to be an average Indian family's expenditure of money on each of these commodities in a normal year. In order to compare the general level of prices of these commodities with those ruling in another year, say 1912, *i. e.*, whether the general price level is higher or lower in 1912 than it was in 1896 and by how much it has changed, we shall probably have to consider the following factors :—

The price of some of the commodities may have risen, while others fallen. We find, say that in the year 1912 the prices of these same seven commodities are now changed, *e g.* in 1896 a maund of wheat costs Re. 1/- only, while in 1912 it costs Rs. 2/- *i. e.*, the price of wheat is doubled

and the unit, which in the base year was expressed as 100, will now be 200. Similarly other prices may have changed and the rise or fall in the price of each commodity is represented in the last column of the following table :—

	Rs.	as.	p.
one maund of wheat at	2	0	0=200
„ „ rice „	6	0	0=150
„ seer ghee „	2	8	0=250
„ „ milk „	0	4	0=200
„ „ salt „	0	1	0= 50
„ pair shoes „	2	0	0=200
Four yards of cloth „	1	0	0= 50

The total price in 1912 will then be = 1,100

This gives an average price of $1,100 \div 7$, i. e., 157 and from this we conclude that the general price level of these commodities rose from 100 to 157, i. e., 57% in the period from 1896 to 1912. This means that a rupee would in 1912, buy a smaller quantity of these commodities than it purchased in 1896, even though it might buy more of some other commodities. By taking only seven commodities we cannot get an index number which is a reliable indication of the general change of prices, because individual commodities may be greatly affected by special causes, and with so small a number any such exception may have a great effect on the result. Averages of percentages calculated in this manner are therefore made from a series of yearly prices of a much larger number of commodities, (usually 50 or more) both wholesale and retail. Such standard tables prepared for the purpose of studying the course of prices, or for measuring the changes in the value of money are called Index Numbers of prices. In England they are prepared by the Board of Trade and in India by the Finance Department and the Department of Commercial Intelligence and Statistics.

Prices are generally studied in order to notice and measure changes in the—

(i) General purchasing power of money, *i.e.*, whether prices are rising or falling, or are steady.

(ii) Cost of living.

Effects of Changes in Prices.

(i) **RIISING PRICES.** When prices rise, the producers of goods of which the prices are rising will gain, and production in such commodities will be stimulated. But while producers are benefited, the consumers have to pay higher prices, and if the wages of workers do not rise to a corresponding degree, they will be losers. In any case, if wages increases are obtained, they will most likely be secured only after some time has elapsed, and meanwhile the workers are worse off. The people whose incomes are fixed are the greatest losers since there is considerable difficulty in adjusting their incomes to the newer conditions. Creditors also will lose, because, when they receive back the money which they lent, it will purchase less than it would when it was borrowed. A rise in the general level of prices means a fall in the value of money, (Note that the rise in price has not *caused* the depreciation in the value of money; one is not the *cause* of the other; it is merely the *same thing expressed in another way*.)

(ii) **FALLING PRICES.** The effects of falling prices are just the reverse of the above. Those classes of the community which are gainers when prices are rising, become losers when prices are falling. Generally creditors and wage-earners gain, while entrepreneurs and businessmen lose. A fall in prices expresses a rise in the value of money, which is said to have appreciated.

Both rising and falling prices create uncertainty in the business relations of different classes of people and, therefore, steady prices are, on the whole, to be preferred.

Use of Index Numbers.

The use of Index Numbers may help to find the causes of fluctuations in prices, *e.g.*, whether the changes are due to an excessive, or insufficient, issue of currency; they may also help to adjust the relations between the different classes according to changes in prices. Another important use as mentioned above, is to measure the changes in the cost of living. If it is desired to find out whether an Indian peasant had a different standard of life *i.e.*, was richer or poorer fifty years ago than to-day, it cannot be done unless the prices of commodities which the peasant consumed then are known. If formerly he had only Rs. 20 as his annual income, while the peasant to-day has Rs. 100 it does not necessarily mean that he was poorer. He might be getting more of the necessaries and comforts of life for twenty rupees then, than he would get to-day for a hundred rupees.

Course of Indian Prices 1861—1934.

The general index numbers of wholesale prices of 39 articles in certain years from 1861 to 1913, and in each year from 1913 to 1934, are given in the following table. The base year for these index numbers is 1873 and the figure for that year is taken as 100

Year	Index No.	Year	Index No.
1861	90	1913	143
1865	107	1914	147
1870	102	1915	162
1873	100	1916	184
1875	94	1917	196
1880	104	1918	225
1885	87	1919	276
1890	100	1920	281
1895	104	1921	236
1900	116	1922	232
1905	110	1923	215
1910	122	1924	221

Year		Index No.	Year		Index No.
1925	...	227	1932	...	126
1926	...	216	1933	...	121
1927	...	202	1934	...	119
1928	...	201	1935	...	127
1929	...	203	1936	...	125
1930	..	171	1937	...	137
1931	...	127	1938	...	

First Period.

There was a rise in prices from 1861 to 1865. During this period there was Civil War in America, in consequence of which, cotton became scarce and the price of Indian cotton rose in the world market. There was a great influx of the precious metals into India and consequently an extensive coinage of silver rupees; this increase in the quantity of money led to a depreciation in its value. The rise in prices may also be partly ascribed to the famine of 1864.

Second Period.

From 1865 to 1885 the price level was generally on the decline and especially after 1873. There was a sudden rise in 1880, owing to famine, but this was temporary. In these twenty-one years there was a general fall of prices all over the world, or at least after 1878, caused on the one hand, by reduced production of gold and its increased consumption for currency, and on the other, by the improvements in the arts of production generally and expansion of trade.

Third Period.

Rising prices from 1885-1914. During this period there was a general rise of prices, especially after about 1900. The rise in India was due to both internal and external causes, the former being :—

(a) Shortage in the supply of agricultural produce and raw materials, coupled with an increase in the demand for these commodities.

(c) An increase in the volume of money, as well as an improvement in the general monetary and banking facilities and a growth of credit.

The world causes were :—

(a) Shortage in the supply of, and an increase in the demand for, staple commodities in the world markets.

(b) Increased supply of gold from the South African mines.

(c) Development of credit.

Fourth Period.

This was the period of the Great War and its immediate effects (1914-1920), when prices soared rapidly, although the rise in India was not so great as in most European countries. The prices of imported articles rose because the countries from which they had been previously obtained were engaged in war. The price of food grains and raw materials rose because of the increased demand for them in Europe. There was a huge balance of trade "in favour of India i. e., the value of exports was more than that of imports, and also a large coinage of rupees in the country.

Fifth Period.

The aftermath of the War (1920—1939). Prices began to fall from 1920 onwards owing to the gradual restoration of a more normal demand everywhere. This fall has continued generally (with a very sharp drop in 1930) because of the greatly increased productive capacity both in agriculture and industry and because of the many restrictions on trade. Again the production of gold is not keeping pace with the demand and position has been worsened by the U.S.A. and France who have hoarded a larger portion of the total supply. Price of gold has reached abnormal heights, being near about Rs. 43 per tola in January 1940. This factor has also been responsible for a fall in prices as the available supply of currency has decreased in all the countries.

(b) Development of railways and other means of communication.

But for the last three or four years there are gradual signs of revival. The index number of wholesale prices which was 119 in 1934 advanced to 125 in 1936 and reached 137 in 1937.

SUMMARY

Although the monetary system of a country has a great influence over its trade and commerce and on its economic progress, it is to be remembered that money is only a measure of values. It is possible to carry on exchanges of goods without the use of money i. e., by barter, but this is inconvenient, and cumbersome, and only suitable to primitive societies. It fails to accommodate the units of purchase to the units of sale, or to secure a double coincidence of wants and possessions.

The use of money for the settlement of obligations represents a great step forward from the older form of barter. In all countries some common thing has been generally taken as the measure of value for all other things, and then later, it has been used as a medium of exchange. Cattle, skins, salt, grain and shells have been used as money media, but precious metals have superseded them all because the metals possess most of the qualities of a good money commodity, viz., acceptability, portability, homogeneity, cognisability, durability, and stability of value. Those metals began to be coined into money, which performed the following important functions by serving as a :—

- (a) Medium of exchange.
- (b) Measure or standard of values.
- (c) Standard of deferred payments.

Anything which is widely used and generally accepted as a medium of exchange is money. When issued by the State it is called currency, and it may be metallic or paper. The former consists of—

(a) Standard money, i. e., that which is freely coined by the Governments to an unlimited extent and the face value of which is equal to the value of its metallic content. Most countries of the world have tried a Gold Standard; and many have also had a Gold Bullion, or Gold Exchange Standard.

(b) Token money is that which has a face value greater than its value as a commodity. The Indian rupee is a 'token' coin; it circulates in India because of the authority of the Government behind it; for purposes of foreign payments the standard is the pound sterling. At present it is a Sterling Exchange Standard, but it is proposed to stabilise it as a Gold Bullion Standard.

Paper money consists of currency notes (issued by Government, or banks) which circulate like token coins, because people have confidence in the issuing authority, and know that they can convert them into standard money, i. e., rupees, whenever required, *Hundis* cheques, and bills of exchange are also paper money.

The object of a currency system is to provide a uniform method of measuring the value of goods and the currencies of other countries, and to secure as far as practicable a stable level of prices.

Two important systems have been in vogue. Gold Monometallism and Bimetallism. The latter was given up during the 'eighties and nineties' of the last century, as it was not possible to maintain a fixed ratio between the two metals for a long time. The dearer metal (gold) had a tendency to go out of circulation and pass either into hoards, or to be used in the arts, or in payments abroad. This tendency of bad money to drive out good money from circulation was noticed long ago and is called Gresham's Law.

Currency notes may be either convertible or inconvertible. Paper currency is not only convenient but also economical. It is necessary, however, to maintain public confidence and minimise the chances of risk by keeping strong and adequate reserves of gold. Governments are sometimes tempted to issue inconvertible notes which begin to depreciate in value, and amount to indirect taxation by the Government, or at least to a forced loan.

The phrase "value of money" means the general purchasing power of money. It varies from time to time like other values under influences of conditions affecting the supply of, and demand for money as money. But in the case of money its value changes precisely in proportion to its quantity, because it has no demand except for being used as money. This is known as the quantity theory of money and may be expressed by the equation

$$P = \frac{MV + M'V'}{T}$$

The changes in the value of money from time to time or variations in the general price level, are measured by the aid of Index Numbers, which are standard tables of prices of representative commodities expressed as percentages.

Questions and Exercises

1. What is money? How did it come into use? What part does it play in modern economic life? Can we do without it?

Describe how India's rural economy has been affected by the introduction of money. (P. U. 1939.)

2. What is the difference between the money measure and other standards of measurement?

3. What are the functions of money? Illustrate how it is becoming more and more a standard of values rather than a medium of exchange.

4. What commodities have been used as currency and why? What is coinage and how did it come into use?

5. Name the different shapes and forms of coins you have seen in India. Compare the present silver rupee as a coin with the following (a) gold sovereign, (b) dollar (U. S. A.), (c) two-anna piece (nickel), (d) Gorakhpuri pice, (e) any coins of Akbar's reign, (f) gold mohar, (g) the rupee of the East India Company.

6. Give in brief outline an explanation of the value of money.

(P. U. 1938.)

7. How many grains does a rupee weigh and what is its fineness? Compare its purity with the British pound sterling or the U. S. A. dollar.

8. Prepare a table of the market values of the actual gold contents of the standard coins in the important countries of the world.

9. Compare and contrast a Gold Standard with (a) Gold Bullion Standard, (b) Gold Exchange Standard, (c) Bimetallism.

10. Which countries of the world have recently given up the gold standard and why? What have they adopted instead?

11. Write a note on the present Indian currency system.

12. What notes are used in India? How do they circulate? How is their convertibility secured? How does the silver rupee differ from the notes?

13. What do you understand by the phrase 'value of money'? Does it change from time to time like the value of other commodities? What do you understand by money being (a) cheap (b) dear. (*P. U. 1934.*)

14. What is "general purchasing power"? How would you compare the general purchasing power of the rupee to-day with that of fifty years ago?

15. What is demand for money? Does it extend and contract in the same way as demand for wheat?

16. State and discuss the "Quantity theory of money." Explain its limitations (*P. U. 1933 and 1936.*)

17. Prepare a table of the index numbers of prices in India and another table of the quantity of money in circulation in India over a number of years and show how the price level has varied with the changes in the quantity of money. If the relation is not precise, explain why.

18. What is money and what qualities must a commodity possess to render it suitable for use as money? Why did gold and silver become universally adopted as money. (*P. U. 1933 and 1937.*)

19. Primitive trade was barter; then money was devised; in highly organized trade little or no metallic money changes hands. Explain this evolution referring to (a) the services rendered by money and (b) the means by which economies are effected in its use. (*P. U. 1935.*)

20. Which of the following are money in India: (a) Notes issued by the Reserve Bank of India (b) cheques drawn upon the Imperial Bank of India (c) Post-office Cash Certificates (d) The English Sovereign. Give reasons for your answer. (*P. U. 1939.*)

21. Why does value of the rupee (in terms of goods and services) vary from time? Briefly indicate how variations in the value of the rupee can be measured. (*P. U. 1939.*)

CHAPTER XX

CREDIT AND BANKING

Credit.

The word *credit* means confidence or trust. (from the Latin *credo*—I believe), but in its use in Economics it does not mean every kind of confidence, (such as, *e. g.*, that which a man places in a friend when he discloses a secret) but rather the confidence, that, if something of value is given by one person to another without taking its return value just then, the one to whom it is given will, if required, return it or its equivalent, or a little more than its equivalent, at some future date. One may purchase a hundred rupees worth of books but the bookseller may not hand over the books unless cash is paid. If, however, he believes that the money will be forthcoming within a reasonable time, he will deliver the books in return for a promise to pay the price at a later date, *i. e.*, he allows credit to the purchaser of the books.

Confidence—the Basis of Credit.

The bookseller will not, however, sell books to every one on credit, but only to those—

(i) in whose character and resources he has confidence or

(ii) who give him sufficient security for the due discharge of their obligations

Very few people will be prepared to lend money to a village *chamar* because he commands little or no credit; most probably he wants the loan for consumptive and not for productive purposes. He is usually extravagant in his habits and not farsighted; he is poor, and if he spends the money he borrows, he has no property out of which the loan can be recovered. On the other hand, if a rich and enterprising youth, who has received a good educa-

tion and training and has abundant resources, wishes to start some industrial enterprise in which he has a good chance of success, then, if he wants to borrow, many people will be prepared to lend to him ; i. e., he commands a good deal of credit because people in a position to lend money will feel confident that they can recover the loan. A credit transaction then is a transfer of goods for the promise of a future equivalent ; the goods are given now in expectation of their return in future. 1. Time, then, is the first element of credit. 2. Secondly, we have seen that credit will only be given to those by whom, it is believed, it will not be abused ; confidence in the borrower is essential. A third element is sometimes present, although it is not always essential, viz, written evidence of the debt ; a written promise to pay may be obtained from the debtor by the creditor and this is called *an instrument of credit*.

Purposes for which Credit may be required. Why the Merchant Borrows ?

1. CREDIT FINANCES INDUSTRY AND TRADE.

Confidence by the creditor in the debtor is necessary before the debtor can obtain credit, but the fact is often overlooked that in order that the debtor should have the capacity to borrow he should have confidence in himself. Debtors often fail to realize that they can retain the confidence which is placed in them, only, if and when, they are scrupulous and punctual in the performance of their obligations. This can only be the case with people who are prudent and careful and who borrow money for productive purposes, or when in dire necessity. In India many of the loans borrowed are for lavish expenditure on marriages and other ceremonies.

In advanced industrial communities borrowing is of a different type from much that is done in India. To borrow money is not necessarily a sign of inferiority or helplessness, but a mark of the credit or confidence which a person commands. Borrowing enables those people who have the necessary character, ability and intelligence, but not the

means, to enter on productive enterprise. Credit places resources at the disposal of those who know how to use them; it is the keystone of modern industry and trade as its main object is to finance industry and commerce during the time which must necessarily elapse between the start of production and the finished articles being in the hands of the ultimate consumer.

2. CREDIT UTILIZES IDLE FUNDS.

It supplies money to those businessmen who need it and takes it away from those who have not the desire or capacity to use their spare cash. India has long been famous as a country where people love to keep their savings in hoards; people have stored their money underground or converted it into gold and silver jewellery. The money thus hoarded remained idle and even deteriorated. 1. With little or no security in the country there were few opportunities for the investment of money and the likelihood of it being returned at the promised date, still less 2. for its profitable use by the borrower; there were few institutions which would command enough credit to attract money from all and sundry. Now, however, anyone who has five rupees to save can keep his money in a post-office or in a bank; he not only avoids the trouble of guarding it, but he can at the same time earn a little interest.

3. CREDIT FACILITATES TRADE AND COMMERCE.

Credit does not simply provide money, but provides it 1. at the time, place and quantity needed. Thus, a man who desires to go to England from India need not carry much money in his pocket; if he has enough in a bank in India he can obtain money as desired in England. He need carry only a letter of credit, as this will enable him to obtain cash, or make payments, at any time to any person, or any amount up to the extent of his balance. This saves much time and trouble and it ensures safety as far as possible. It is just the same in payments for goods which

have to be made, perhaps thousands of miles away in the same, or in another, country. All that is necessary is a written instruction or order to the bank; no transfer of cash is necessary so long as the bank at the other end is satisfied that it will be re-imbursed for any money which is handed over. Thus credit facilitates trade, commerce and travel.

4. CREDIT ECONOMISES THE USE OF THE PRECIOUS METALS.

Because credit does the work of money without any passing of actual cash, it takes the place, not merely of paper money, but of gold and silver which can then be devoted to other uses. It also avoids the loss through wear and tear of the metal in the coins.

MECHANISM OF CREDIT

Its Organization.

Credit is more useful and effective if it is properly organized and controlled. People with spare money should know where to invest it and those who want money should know from whence it can be obtained. From the standpoint of the public good, it is, therefore, important that there should be some machinery to give a proper direction to the flow of capital. On the one hand, there should be agencies to collect money from persons who have savings, but who lack either ability or the disposition to use them productively. On the other hand, there have to be agencies to regulate the flow of this collected capital in the form of loans into the pockets of those who have the necessary business qualifications, but have not enough capital at their command to enable them to employ their energies and talents, not merely for their own benefit, but for increasing the productive capacity of the country and thus furthering the general welfare.

All this implies that there should be agencies to convert credit into cash. Even if a hundred rupees worth of books are purchased on credit, the price will have to be paid, some time or other, to the bookseller. Though

for the time being the transaction is carried through without money, cash must ultimately pass from the buyer to the seller. If some means, however, can be found to convert confidence into a means of payment which is readily acceptable, the use of money can, to a certain extent, be avoided, and credit can be converted into money or cash. Suppose, for instance, A wants to purchase raw cotton from B, but has no money. He asks a loan of Rs. 1,000 from a bank X. The bank manager agrees to give him credit and permits him to draw the amount by an order of payment, *i.e.*, by means of a cheque. A can now go to B, buy the cotton and, instead of paying 1,000 rupees in silver, he can give B a cheque which the latter takes because he is confident that the bank X will pay the amount to him when the cheque is presented. B does not usually retain his money with him but keeps it at bank Y, to whom he sends the cheque to collect the money from X and put it to his credit. The *loan* advanced by bank X thus becomes a *deposit* in bank Y when Rs. 1,000 are paid by the former. Further, suppose that another person P has to pay Rs. 800 to Q and takes a loan from the bank Y. He draws a cheque for Rs. 800 on this bank and gives it to Q who keeps his funds with bank X, and sends the cheque to that bank as a deposit. In this case the loan advanced by Y becomes a deposit with X, and the latter is now entitled to receive Rs. 800 from the former. X has to receive Rs. 800 from Y and to pay Rs. 1,000 to Y; therefore only Rs. 200 need be paid by X to Y and the whole account is cleared. These two double transactions for Rs. 800 and 1,000 respectively have been completed by one transfer of 200 rupees.

The machinery by which credit operations are organized consists of (i) Credit Institutions, *i.e.*, Banks with their clearing houses and (ii) Instruments of Credit, *e.g.*, cheques, *hundies* or bills of exchange, and notes.

Banks.

Banks are the institutions which organize credit. They have been called credit factories, as they organize and control the issue and circulation of credit instruments and regulate the granting of loans. The term "Bank" has not been defined anywhere in Indian or English statutes, but banking is the business of dealing in money and credit, and in the remittance of money from person to person and from place to place. The office or house in which such business is carried on is called a 'Bank.' It may be carried on by an individual, (e. g., shroffs and money-lenders in India) or by a partnership, or by a limited company.

THE BUSINESS OF A BANKER is of three distinct kinds :—

(i) *Giving money now for money at a later time.* To receive money on deposit or loan, and to advance money or make loans to customers, i. e., borrowing and lending. The advice which Shakespeare put into the mouth of one of his characters "neither a borrower nor a lender be" would, if practised, mean the cessation of all banking business. The banker attracts deposits and pays interest on them; he lends the amounts thus borrowed to those who can make use of the money and from them he charges interest at a higher rate than that which he gives. The difference between the total interest charged and the total interest paid is the banker's profit.

(ii) *Advancing money in one place for money in another.* A banker undertakes, on behalf of his customers, to make payments from one person to another, and this often involves sending money from place to place. A small commission is usually charged on such remittances by the bank.

(iii) *Note Issue.* The third class of business sometimes done by banks, is the issue of notes which are used as currency. A bank, instead of giving coins to the customers, may give them notes on which are printed promises to pay coin or bullion on demand. If the customers are willing to

accept them, these notes circulate freely from hand to hand like money, because people have confidence in the solvency of the issuing bank. The tendency in each country during the last fifty years has been for this privilege to be made a monopoly of some important bank, acting, either under the control of or in close touch with, the government of the country.

Deposit Banking.

The essential feature of the business of deposit banking is that the bank undertakes to receive money from the public and to repay it on demand immediately when repayment is asked for by a written order called a cheque. To be successful, and also perform a public service, the banker must be a person of good standing and credit; he must be able to inspire confidence in people so that they may entrust their savings to him. He should foster and maintain that confidence by being always ready and willing to repay the amounts deposited with him.

BANKS RECEIVE MONEY ON—

(a) *Current Account.* When money is deposited under an arrangement that it may be withdrawn on demand, then it is said to be "on current account." Some banks pay small rate of interest on the balance which a customer maintains with them on current account; others pay no interest on such balance because they can be withdrawn at any time without notice and consequently the banks are unable to use the money freely.

(b) *Fixed Deposit.* Money which is deposited with a bank for a certain fixed period, to be withdrawn only on the expiry of the stipulated term, is said to be placed on "fixed deposit." The banker is in a position to use this money in a more profitable form of investment than funds deposited on current account and he can therefore pay a higher rate of interest on such deposits; generally speaking, the longer the period, the higher the rate of interest paid; if left for a year, a higher rate is likely to be paid than on deposits for three months.

(c) *Savings Fund Deposits.* These encourage saving on the part of the people who have only very small sums to spare. A moderate rate of interest (usually about 2 per cent.) is allowed and amounts as low as five rupees can be deposited. An account may be opened in the Post Office Savings Bank with a minimum of As. 4 only. Small amounts can be withdrawn at any time but for large sums a few weeks' notice is required to be given to the bank or post office.

(d) *Credit Deposits.* In addition to the cash deposits indicated above, there are deposits created by the banks giving out loans. A loan may be granted by a bank of say Rs. 5,000, but the person to whom it is granted may not require the whole amount immediately, in which case the bank will allow him to draw the money whenever he requires, up to the prescribed limit of Rs. 5,000. The loan advanced by the bank is thus treated as a current account deposit.

Cheque System.

Against their money in current account depositors may draw cheques, which are nothing more or less than payment orders on a banker against the funds in his possession, and which are properly applicable to the payment of the cheques. A cheque is drawn on a specified banker and is always payable on demand. It may be in favour of the drawer himself, or of any other person, or his order, or to bearer. Usually cheques are written on the printed forms supplied by banks to their depositors. A specimen of one is given in Plate No. 1. A similar order drawn by one bank on another is called a Banker's Draft as shown in Plate No. 2.

When a person, entitled to draw cheques, wishes to make a payment to another person he can do so by means of a cheque, which is thus used as a means of payment and may be passed on like money. By the use of cheques the need for metallic money and notes is

greatly reduced and their use economised. When two persons A and B each have their accounts with the same bank and A makes a payment by cheque to B, the latter will send the cheque to the banker, who will simply debit the amount of the cheque to A's account and credit it to B's. No money will pass between the two and the payment will be effected by a simple book-keeping entry in the accounts of the bank. An example was given earlier of how, when persons have their accounts with two different banks, the credits of one bank become the deposits of another. Large payments are effected by the transfer of small balances from one bank to another, or by simple book-keeping entries.

Clearing House. There are several Banks in most cities each with a large number of customers. A regular customer of a bank deposits with it all the cheques he receives, no matter on what bank they may have been drawn. Each bank receives cheques every day drawn on other banks and the others receive cheques drawn on in it; each bank has, therefore, to offset the cheques received by it against the cheques it has to pay out. This cancelling of cheques and adjusting of mutual accounts among banks is done through offices called Clearing Houses. The clearing may be done either through a Central Bank, which acts as the banker's bank, or by the representatives of all the banks meeting in a special office or Clearing House. By a process of cancellation of these inter-bank debts the use of metallic money and notes is so much reduced, that, of the total payments made by cheques in India only about four or five per cent. have to be made by transfer of money balances between the banks. In England probably not more than one per cent. of the total amounts of cheques drawn on banks are settled in cash, apart perhaps, from the weekly cheques for wages drawn by manufacturing firms. The principal clearing houses in

India are at Calcutta, Bombay, Madras, and Karachi and there is also one in Colombo. Clearing houses have also been established in Cawnpore, Lahore, Delhi, Simla and Ahmedabad. The duties of a clearing house are usually uncertain by the Imperial Bank where there is no branch of the Reserve Bank, and a representative of each member bank attends on business days to present all the cheques drawn on other banks negotiated by his bank, and to receive those drawn on his bank. All the memberbanks keep their balances at the bank where the final settlement of balances is effected by book entries. The total value of the cheques cleared in India in the year 1939-40 was Rs. 2,236 crores.

Bank Loans. The total funds available for a bank to utilize consist of its capital and the various kinds of deposits. Separate accounts are kept for each of these, and also for each customer, but all the monies thus available are mixed in one fund and are at the bank's disposal to employ as it deems desirable in banking business. "The manner of employing available funds is the whole secret of safe and successful banking." Once money is deposited with a banker he is, in law, for the time being, the owner of such funds entrusted to him; but in no other way does it become his property to be employed in whatever manner he pleases. The responsibilities of a banker to the public are great, he cannot afford to lock up his money by lending it for long terms: he has not only to keep sufficient cash 'reserves' to meet current needs, but also to invest his funds in such short term securities as will permit him to recover or realize the amounts whenever they are required to meet the demands of depositors. It cannot be insisted on too often that the first duty of a banker is to be able to pay out *on demand*.

The loans made by the banks go to finance the trade and industries of a country, and hence in India the problem

of rural finance is of great importance. The agriculturists have low credit but they require loans for their work they are often extravagant, and there is always the danger that the money borrowed may be wasted and not spent on agricultural production and improvement. The loans they require are also for long terms and there is a need for the provision of such banking facilities to the cultivators as will enable them to effect real and substantial improvement in agriculture.

Exchange, Banking and Financing of Trade.

Credit enables people to avoid the unnecessary carrying of money in making remittances from one place to another. They may send currency notes, or cheques or drafts, or postal orders, or hand in money at one Government Treasury to be paid out of another in some distant place. In addition to these methods most usually in vogue in India for making remittance within the country, there are also payments made at distant places by means of *hundies*, and for making payments abroad there are bills of exchange.

Hundies.

Hundis are negotiable instruments written in an oriental language or in one of the vernaculars and are sometimes promissory notes, but more often bills of exchange in form and substance, and are subject to local usages. They have been in circulation in the country from very early times and usages attaching to them varied with the locality in which they came into existence or were circulated. The word 'hundi' is said to be derived from the Sanskrit word 'hund,' which means 'to collect.' This shows that the purpose, for which these instruments were originally discovered and to which they were employed, was that of collection of debts. Even now hundis are sometimes used for the collection of debts. A merchant who has sold goods from Lahore to a merchant in Karachi may collect the price of the

goods sent by drawing a hundi for the amount on the Karachi merchant. The hundis have been current amongst the Hindu merchants from very remote times. They may be traced as far back as the Mahabharata. "A legend of the times of Lord Krishna has it that Narsingha Mehta of Junagarh draw a hundi on Samlashah of Dawarka" (M. L. Tannan—Law and Practice of Banking in India). According to Dr. Jain another tradition has it that Vastupal, Tej Pal drew a hundi of ten "crores on Nagar Seth city banker to finance the building of the temple of Dilawar. Such traditions date as far back as 5000 B. C. They had attained to a very high degree of credit in the country. Although due to the absence of a strong central or national government paper currency was almost unknown in India in early times, yet the merchants had evolved in the hundi system a very facile and simple medium of currency and a strong and sound system of credit. A study of forms of the hundis in vogue in different parts of the country, their different kinds, and the manner in which they circulated is not of interest merely to an antiquarian but shows how the Indian Mercantile community had evolved an excellent system of credit for themselves to meet their needs and how they backed it up by trust and confidence. The dishonour of a hundi was regarded as an act amounting to that of insolvency on the part of a merchant and cases of dishonour were rarely met with in this country. The banker has always played an important part in India. The hundi system bears testimony to the great confidence the ancient Indians reposed in their bankers. Allusion is made to money lending and primitive banking in Rig Veda among the ancient Indians (Vedic Index of Names and Subject by A. A. Macdormeth & A. A. Keith, Vol. 1). That during Manu's time banking

had well developed in India is apparent from the fact that Manu devotes a special chapter to the subject of "Deposits and Pledges." He says a sensible man should deposit money with a person of good family of good conduct, well acquainted with the law, veracious and having many relations wealthy and honourable Aryan. He finances not only trade and commerce but also agriculture. The hundi system was the backbone of all commercial transactions. It not only facilitated the transfer of funds from one place to another, but also helped to finance trade and provided a facile and sound medium of currency and credit.

Probably the original hundi was not open and was sealed to preserve the secrecy and relations of the drawee and the drawer, but later on when it was found to be a very suitable and convenient vehicle of transfer of money it was disencumbered of some unnecessary matters and was left open and the paper on which it was written gradually shrunk to a slip now in use. However, unfortunately the long commercial experience which requires brevity did not purge them of the long prefatory salutations unnecessary prayers and the conditions definitely defined. They go to a long extent to check their free circulation.

Formerly the term hundi was applicable to native bills of exchange only, a promissory note was called a teep, and in certain parts a "ruqa" but, now the term as generally understood includes all indigenous negotiable instruments whether they be in the form of notes or bills. The word hundi is a wider term than the bill of exchange.

But an instrument in order to be a hundi must be capable of being sued on by the holder in his own name, and must by the custom of trade be transferrable like cash by delivery. Thus a 'pahunch' which is a writ-

ing merely acknowledging the fact that a certain amount is received by the person signing it from another person is a mere receipt and neither contains a promise nor an order to pay and has no mercantile tradition of transfer by delivery is not a native negotiable instrument.

The customs relating to these hundis were many and various. Under the Hindu Law a hundi payable even to a specified person or to order was negotiable without endorsement by the payee. An indorser was found entitled to sue on a hundi without re-indorsement in his favour. So also a hundi having got accepted by the drawee could circulate without indorsement. Various forms of acceptance were in vogue in various places. In certain parts of the country even oral acceptance was sufficient. The owner of a hundi who lost it could claim a 'peth' (duplicate) or a 'per peth' (triplicate) from the drawer and on presentation of this to the drawee had a right to payment. In certain places a notice of dishonour is not necessary to charge the parties liable on a hundi. Again the drawer of a hundi by crossing it with the words "Sri Nishani" can exclude his personal liability. A custom of presentation at a Bank was found prevailing in Bushire. So also it was found that in Dacca gumashtas could draw hundis without incurring personal liability. In some cases notice of dishonour was found unnecessary under Hindu and Mohammadan Laws. Under Hindu Law even an order hundi could be negotiated without indorsement and an indorser can sue without re-indorsement in his favour, if it is returned to him after dishonour. In the Punjab a custom was found to exist where-under a drawee making conditional payment of a hundi, which if dishonoured and returned is entitled to refund of the amount paid if the hundi is not presented again within four days. Among the Shroffs in Bombay when a hundi is sent to

a Shroff for collection he acquires the rights of a holder in due course merely on crediting the amount thereof to his customer's account. In addition to such customs several varieties of hundis, each having its own distinct characteristics, are current in the country.

Several varieties of hundis are current amongst Indian merchants and we give below their chief classes and forms.

The first classification is that into Darshani Hundis or sight bills and Miadi Hundis or bills payable after a specified period.

The Darshani Hundi is a hundi which is payable at sight. They sometimes sell at *batta* (discount) and sometimes at *badha* (premium). When demand for hundis on a certain place is greater than the supply the hundis sell at *badha* that is at price which is somewhat higher than the original amount (premium). While when demand is less than the supply they sell at '*batta*' i. e., at a price which is a little lower than the amount for which the hundi is drawn (discount). *Hundiana* or Commission is sometimes deducted by the lender from the amount advanced. Darshani Hundis payable on the demand must be presented for payment within a reasonable time after they are received by a holder. Where loss is caused to the drawer by delay in presentment it falls on the party in fault and not on the drawer. The typical form of a Darshani Hundi is as follows :—

Om Sri Ganeshji Sahai.

Om Sri Sada Salamti howe. Lala Kundan Lal Sant Ram Jog likhi Shahr Sangla Hill seti. Lala Ramsarn Das Badri Nath ki ram ram wachni. Aprant hundi nag ek tusade upper kiti. Rupaya ek hazar akhri hazar ek nime panch sau, tisake dugne dewane. Rakhe

Sangle wich Lala Uttam Lal Hari Ram pason Miti Sawan di 7 Sammat 1981. Pahunchan sar Shah Jog ropaya rokari chalan bazar chehra shahi bhar dewane. Sbahr Delhi which chokash hokar dam dewane. Hundi likhi miti Sawan din 7 Sammat 1981. Tiket ek ane da laga ditta baiga.

Daskhat Ramsarn Badri Nath.

On back of the Hundi

Rupaya ek hazar
nimen panch sau. tiske
dugne dewane.

1000

Address :—

Kundan Lal Sant Ram.

Chandni Chauk, Delhi.

Translation :—

Darshni Hundi.

May the blessed Ganesha protect.

May you live in peace and happiness. Addressed to Lala Kundan Lal Sant Ram from the town of Sangla Hill. Greetings from Ram Sarn Badri Nath. Drafted this hundi against you of Rs. 1,000 (one thousand) whose half is equal to 500, pay double of that. Money paid to us in Sangla by Lala Uttam Ram Hari Ram Miti Sawan 7, 1981. The amount be paid up in the town of Delhi on sight of this hundi in the current coin of the realm to a Shah or banker. Pay the amount after making inquiry and taking precaution according to the bazar practice.

Hundi drafted on Sawn 7, 1981.

Stamp of one anna affixed.

(Sd.) Ram Sarn Badri Nath,

On the back of the Hundi.

Rs. 1,000 (one thousand)

half of which is Rs. 500.

1000	Rs. 1,000
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Address :—

Kundan Lal Sant Ram,
Chandni Chowk,
Delhi.

Miadi Hundi.

A hundi which is payable after a specified period of time is called Miadi or Muddati Hundi. Sometimes Sahukars advance money on the security of hundis or pronotes. That is also called a hundi which is a sort of agreement stating the amount advanced, the rate of interest and other conditions of the loan. Suppose Kirpa Ram takes a loan of Rs. 1,000 from Jagan Nath at 12 per cent. per annum for 3 months. Kirpa Ram will take Rs. 970 and will sign the hundi for Rs. 1,000. It means that the interest is deducted in advance from the principal. Kirpa Ram can renew the loan if he likes after three months in the same way. But even a hundi payable on demand with a stipulation for interest may be drawn as follows :—

“The account of Sutar Ram Chandra Vithobaji, the first of Chaitra Vadya of Sammat 1945, the day of the week, Tuesday, the date of 16th April, 1889, in cash Rs. 2,125 namely rupees twenty-one hundred and twenty-five in full in cash have been received, *i. e.*, borrowed on personal security. The same are payable. The interest thereon accrues due at the rate of 6 per cent. namely six and one quarter cents, *i. e.*, for Re. 1 per cent. per mensem. The same are payable whenever the owner (*i. e.*,

the lender) may demand (payment thereof.)

1. Attestation of Shah Signed (on a one anna
Ganura Okaji to Rs. 2,125 receipt stamp Ram Chand
in the presence of the party. Vithobaji Rs. 2,125 (two
thousand one hundred and
twenty-five).

1. Attestation of Shah
Partap Lalji of Rs. 2,125.

16th April, 1889.

When, however, such hundis are drawn payable after a certain specified period of time the usual practice is to charge interest for the period at the time of drawing the hundi.

In Ludhiana and Jullundur a hundi is usually drawn payable sixty-one days after date and is called Ikahat Miti Hundi. In Amritsar it is usually payable 91 days after date.

The typical form of a Miadi Hundi is as follows :—

Sri Ganesh Ji Sahai.

Om Sri Sada Salamti howe. Lala Amar Nath Mela Ram Jog likhi Gujranwala seti. Lala Harnam Das Gokal Chand di ram ram wachni. Aprant hundi nag ek tusade upper kiti Rupaya 400 akhri rupaya char sau nimen rupaye do sau tis de dohre dene. Rakhe Gujranwale wich Bhai Daulat Ram Durga Parshad pason. Chet di 10 Sammat 1971. Rupaye din 21 pichhe dewane. Rupaya chehre shahi takana, Chukas laga kar dam Amritsar wich dewane. Hundi likhi Miti Chet din 10 Sammat 1971.

Daskhat Harnam Das.

Back

Rupaya 400 Akhri
Char sau ke nimen do
sau de dugne dewne.

400

Translation

- May the blessed Ganesh protect.

May you live in peace and happiness. Addressed to Lala Amar Nath Mela Ram from Gujranwala. Greetings from Lala Harnam Das Gokal Chand. Drafted this hundi against you for Rupees 400 (four hundred) half of which is rupees 200 (pay double of that). The amount received in Gujranwala from Bhai Daulat Ram and Durga Prashad on Chet 10, 1971. The amount should be paid after the expiry of twenty one days, in the current coin of the realm. Drafted on Chet 10, 1971.

(Sd.) Harnam Das.

Back.

Rupees four hundred
(400) half of which is rupees 200.

400

Address ;—

L. Amar Nath Mela Ram,

Katra Ahluwalian,

Amritsar.

The above are the two typical forms of hundis. The other forms are the variations of the above according to local usage. Some of them are made payable to a specified person, others may be made payable to bearer while others still may be made payable to Shah only or to a man of worth and substance in the bazar. Thus they may be either Shah Jog, or Nam Jog or Nishan Jog or Dhani Jog Hundis.

Again according to usage in certain localities hundis imply a condition that money is payable only in the event of the arrival of the goods against which they are drawn. They are known as Jokhmi Hundis. Another peculiar form of hundi is known as Jawabee Hundi; while in the case of Marwari Hundis a letter is sometime given to a

holder addressed to some person other than the drawee in the town on which the hundi is drawn asking him to accept the hundi for honour. This is known as Zikri Chit. We shall give below the legal incidents and form of all these different classes of hundis, but most of them have gone out of use.

The Shah Jog Hundi.

The most important current form is the Shah Jog Hundi. This hundi may be Dafshani or Miadi. It may mention the name of a depositor or not, but it is payable to or through a Shah, *i. e.*, banker or a person of worth and substance in the Bazar. This is the most widely used hundi in the country. The Nam Jog which is payable to the payee named in the Bill only is going into disuse. The words Shah Jog in a hundi lend to it additional credit and make it of the nature of a cheque generally crossed. It is payable only to a respectable bearer and only when it is indorsed to the last indorsee. It is neither a bill nor a promissory note. If attested it can be sued on either as a bond or a promissory note. It is not similar to a bearer bill. It cannot be transferred without endorsement. It differs from a bill in two respects :—

(i) the acceptance of the drawee is not generally written across it, but the particulars are entered in the drawer's book.

(ii) it is not usually presented for acceptance before due date. It passes from hand to hand by delivery and requires no endorsement till it reaches a Shah who after making inquiries to secure himself would present it to the drawee for acceptance or for payment.

Here is the translation of a Shah Jog Hundi originally in Gujrati :

23rd April, 1894

"Peace and prosperity at the good place the seaport town of Bombay, to Shah the most illustrious Dewji, son of Punjam, written from the seaport town of Bombay by Shah Dewji son of Punjam, his (salutations of) Johur do you be pleased to read, to wit, from this place from the Rokhia Thakur Bhawnji Harbhum Rs. 900, namely, nine hundred, have been received in full. do you pay the same immediately on arrival of the hundi; do you pay the same in the name of or to Shah, on seeing his house, place of residence and above this mark is that I will write in the letter. Chaitrya Vadya 3rd of Sammat 1950, the day of the week Monday, own handwriting."

On the back was written.

The half being Rs. 450, do you pay the double thereof; do you pay in all Rs. 900 namely nine hundred in full.

Rs. 900

Shah Shri Dewji son of Punjam.

Nam Jog Hundi.

In contradistinction to the Shah Jog Hundi there is the Nam Jog Hundi. This is payable to the person whose name is specified in the body of the hundi. Its form is very much the same as that of the Shah Jog Hundi except that in place of the word Shah the name of the payee is inserted. Here is one :

To,

Babu A. C. Gosh at Calcutta worthy of all eulogy. Written from Lahore by Ram Lal from whom please accept greetings. To wit. Please pay on receipt of this hundi to H. M. Bhatta Charya according to the custom of hundi the sum of Rs. 500 (half of which is Rs. 250/- pay double of that) for value received.

Sd. Ram Lal

Dated.

Such a hundi is payable to the order of the payee

and can be indorsed like a bill of exchange payable to order. Sometimes along with the hundi is given a letter which bears the description of the party in whose favour it is drawn. In that case it is payable to that person alone and cannot be indorsed. The amount is paid to the payee named and if he is a man not known to the drawee, for purposes of identification, the attestation of two witnesses was secured at the time of payment. This class of hundis is, however, falling into disuse, for it affected the credit of the drawee if he could not arrange for payment on presentation.

Nishan Jog Hundi.

When the word Nishan Jog in a hundi occurred the amount thereof was to be paid only to the person who presented it.

Dhani Jog Hundi.

Where the amount of a hundi is made payable to a Dhani and the words Dhani Jog appear instead of the words Shah Jog or Nam Jog or Nishan Jog the hundi is known as a Dhaniji or Dhani Jog Hundi. The word Dhani means owner and so the amount is regarded to be payable to any owner, or holder, or bearer. One form of such a Hundi is as follows :—

“The account of Sutar Ram Chandra Vithobaji, the first of Chaitra Vadya of Sammat 1945, the day of the week Tuesday the date of 16th of April 1889, in cash Rs. 2,125 namely rupees twenty one hundred and twenty five, in full in cash have been received (i.e., borrowed) on personal security. The same are payable. The interest thereon accrues due at the rate of $6\frac{1}{2}$ per cent. The same are payable whenever the Dhani may demand.

(Sd.) Ramchandra Vithobaji

These have been held to be negotiable instruments payable to bearer. When a hundi initially payable to bearer is indorsed in full it ceases to be a bearer hundi.

Firman Jog Hundi is one which as its name indicates is payable to order.

Dekhanhar is payable to bearer or whosoever presents it.

Jokhmi Hundi. According to the custom of Hindu merchants the Jokhmi Hundi implies a condition that the money shall be payable only in the event of the arrival of the goods against which the hundi is drawn.

A Jokhmi Hundi is in the nature of a policy of insurance with this difference that the money is paid beforehand and is to be recovered if the ship arrives safely. The hundi is drawn by the shipper (the hundiwala) on the consignee (the malwala) and negotiated with the insurer at a price which is less than the amount of the hundi (at the current rate of exchange) by the amount of the premium of insurance. If the goods arrive the insurer may obtain them or the value of them as stated in the hundi. The hundi is an authority to the consignee to pay for the goods or deliver them up to the holder, but the latter has no right of action against consignee and holds the hundi on the credit of the drawer or indorser. If the goods are lost, the holder cannot claim payment (for he is an insurer), but he is entitled to be paid in full in the case of partial loss or damage, unless it amounts to general average loss in which case a rebate is made to the extent of the loss.

Here is the example of a Jokhmi Hundi :—

“There is welfare ! To the feet of the worshipful Bhai of five-fold dignity, Liladhar Govindji at the seaport town of Bombay, a great and good place. From Navanagar written by Bhai Liladhar Govindji whose protestations do you be good enough to read. To wit. We have received

here from (Thakur) Jodowji Rs. 40,000 (forty thousand) in full, which is received. In respect thereof this Jokhmi Hundi is drawn against goods on board the Ganga Hari Prasad, Nakhwa Bhoja owner Th. Dyalji Morarji, being 29 (twenty-nine) bags of sheep's wool shipped from the seaport town of Tunis against which the Jokhmi Hundi is drawn after the said vessel shall have arrived in a safe and sound and secure manner. After the time of 4 days thereafter do you be good enough to pay the money to one named Shah looking to his means, station and place. The token is that we shall write about it in the letter of advice. The 14th day of Magsar Vad, of Sammat 1935 (22 December, 1878), The hand-writing of Damodar the son of the living Inderji, whose protestations do you be good enough to read."

On the back.

"Do you be good enough to pay the double of the half Rs. 20,000 (twenty thousand) in all Rs. 40,000 (forty thousand) do you be good enough to pay according to usage of Jokhmi Hundi.

Jawabi Hundi.

"The nature of the transaction known as Jowabee Hundi is as follows:—

A person desirous of making a remittance writes to the payee and delivers the letter to a banker, who either indorses it on to any of his correspondents near the payee's place of residence or negotiates its transfer. On its arrival the letter is forwarded to the payee who attends and gives his receipt in the form of an answer to the letter, which is forwarded by the same channel to the drawer of the order."

Zikri Chit.

The Zikri Chit is a letter of protection which is given to the holder of a hundi by the drawer or any other prior party when the hundi gets dishonoured. It is in use all over

the country in connection with Marwari Hundis. The letter is addressed to some person residing in the town to which the hundi is addressed, or in which the hundi is made payable. The letter asks the addressee to take up the hundi in case of dishonour. The person thus requested can accept the hundi for honour. Under the Zikri Chit a hundi may be accepted for honour without being noted or protested according to the custom prevalent among the Marwari Shroffs. Here is an instance of such a Zikri Chit :—

Delhi.

To good place Amritsar. Letter written to Bhai Ram Saran from Sham Lal who sends greetings. We had sold a hundi for Rs. 200/- from Amritsar on Gopi Nath by Vir Bhan Bansi Lal in favour of Sunder Das dated Har Badi 1 Samvat 1991 payable to Bhai Amar Nath Ji, from whom we learn that the hundi has not been paid. If this hundi has been paid well and good otherwise please pay the hundi as stated above and debit the amount to our account returning the hundi unindorsed to us.

Written on Bhadon Sudi ek Samvat 1992.

(Sd.) Sham Lal.

Peth and Perpeth.

When a hundi is lost the holder may call upon the drawer to give a duplicate. This duplicate is called a Peth. Here is the example of a Peth.

Om Sri Ganesh Ji Sahai.

On Sri sada salamati howe. Lala Kirpa Ram Jaggan Nath Jok likhi Zaffarwal seti, Lala Ganpat Ram Chet Ram ki Ram Ram wachni Aprant hundi nag ik tusade upper kiti si. Rupaya akhri chhi sua niman tin sue ke dugne dewane. Jahan rakhe Lala Sant Ram pase. Miti Sawan din chhe Bidi War Mangal, 25 din pichchhe repaya rokar chalan bazaar chehra Shahi bhar dewane. Chokas hokar

dam so Lala Ji hundi gum ho gai. Aprant hundi khoi gai ho to peth likh dewani. Hundi likhi miti Sawan din chhe Sammat 1981 peth likhi Bhadron din ek Sammat 1981.

Daskhat Ganpat Ram Chet Ram.

Back

600

Rupaya chhe sau

akhri nimen tin sau

Translation

May the blessed Ganesh protect.

Om. May you always live in peace and happiness. Addressed to L. Kirpa Ram Jaggan Nath from Ganpat Ram rupees 600, i e., six hundred half of which is 300 rupees of which give double. The amount has been received here from Lala Sant Ram on Miti 6 of Sawan day Tuesday. Pay the amount in cash after 25 days after enquiry and taking due precautions according to the custom of the bazar. Lala Ji the hundi has been lost. If the hundi be lost pay the peth. Hundi drafted on 6 Sawan 1981. Peth wrote on 1 Bhadron 1981.

When the duplicate is lost the holder may claim a triplicate and so on. Each of these subsequent hundis is called a per peth. Here is the form of a per peth :—

Om Sri Ganesh Ji Sahai.

Om Sri sada salamati howe, 'Lala Kirpa Ram Jaggan Nath Jog [ikhi Zaffarwal seti Lal Ganpat Ram Chet Ram ki ram ram wachni. Aprant hundi nag ek tusade upper kiti si Rupaya chhe sau nimen tin sau ke dugne dewane, Jahan rakhe Lala Sant Ram Anant Ram pason Miti Sawan din chhe badi war Mangal. Din das guzran piochhe Shah Jog rupaya rokar chalan bazar chehra shahi bhar dewane. So Lala Ji peth gum ho gai. Aparant peth gum ho gai ho to per likh dewani, Hundilikhi miti Sawan din

chhe Sammat 1981. Peth likhi Badrou di ek Sammat 1981, Perpeth likhi Miti Bhadon din 15 Sammat 1981.

Daskhai Ganpat Ram Chet Ram.

On back,

600

Chhe sau nimen tin sau ke dugne
dewane.

Translation

• May the blessed Ganesh protect.

Om. May you always live in peace and happiness. Addressed to L. Kirpa Ram Jagan Nath from Zaffarwal. Greetings from Ganpat Ram Chet Ram, Wit, had drawn one hundi against you for Rs. 600, i.e., six hundred half of which is three hundred. The amount has been deposited here by L. Sant Ram Anant Ram on Sawan 6, day, Tuesday. On the expiry of 10 days pay to Shah the amount in cash after inquiring and taking due precautions. Lala ji the Peth was lost. The Peth having been lost the Perpeth has been given. Hundi drafted on 6 Sawan 1981. Peth given on Bhadon 1, 1981, Perpeth written on Bhadon 15, 1981.

(Sd.) Ganpat Ram Chet Ram.

Khokha.

A hundi when paid and cancelled is called a khokha.

Purja.

Purjas are current in Bengal. It is a request in writing by the borrower to the lender to pay the amount mentioned therein. It bears an anna stamp. It is used for temporary loans, it is not a bill of exchange and is not negotiable.

Bills of Exchange.

A bill of exchange is an instrument in writing containing an unconditional order signed by the maker directing a certain person to pay a definite sum of money

to, or to the order of, a certain person or to the bearer of the instrument. Bill of exchange is a more general term than *hundi*; it includes *hundi*. It may be used for the transfer or remittance of money either within, or outside the country. The typical form of a foreign bill of exchange is given in Plate No 3.

The Most Suitable Investment for Bankers.

A *hundi* or a bill of exchange, then, enables a merchant in one place to provide himself with funds immediately he sends his goods and also enables the consignee to pay the price, either when he has received the goods, or when he has sold them and obtained the money. Thus bills of exchange finance trade from one end of a transaction to the other. When a bill is discounted with a banker, he lends money to the drawer usually for a short period (30, 70 or 90 days). The banker in advancing money against *hundies* invests his funds in what are usually safe, certain and short term loans. He can be reasonably certain as to when the money will be paid, and is therefore able to regulate his funds in accordance with his needs. Bills of exchange form the most suitable form of investment for a banker as they provide him with a regular flow of available money which is also at the same time being profitably used by him.

Kinds of banks.

All, or any one of the above types of business may be conducted by banks, which are usually classified somewhat as follows in accordance with the manner in which they can invest their funds :—

(i) *Commerical*. These finance commerce and invest their funds mostly in discounting bills of exchange.

(ii) *Industrial*. Those which lend for longer periods to industrialists for developing manufactures.

(iii) *Agricultural*. These give loans mostly to cultivators for productive purposes.

(iv) *Exchange*. Those which deal mostly in foreign exchange business.

(v) *Savings*. These exist to encourage the habit of saving among the people and to mobilise small sums of money.

(vi) *Central Banks*. These banks are the custodians of Government funds and act as bankers' banks. They are also authorised to issue notes. Reserve Banks of India is an example.

Functions of Banks.

We may now discuss the fundamental importances of banks in a modern community. Technically, the functions of banks are the borrowing and lending of money and the issue of notes, and these functions are of very great importance and responsibility. Banks—

1. Encourage saving and thus provide for the growth of capital.
2. Collect capital from where it is available.
3. Supply capital to people who can make use of it.
4. Make possible a safe and convenient medium of exchange, e. g., the cheque.
5. Organize industrial credit and convert it into cash.
6. Finance governments as well as industry and trade (internal and foreign).
7. Provide the means to avoid transporting money from place to place.
8. Economise the use of gold and silver.
9. Act as guardians of a country's currency and credit and thus become the basis of its economic prosperity.

THE INDIAN MONEY MARKET

A *Money Market* is not any particular place but consists of all those persons, places or institutions in a country from which money can be obtained on loan. Collectively, these are called the money market of the country. In India the money market may be divided into (i) Indigenous (ii) Modern.

Indigenous Banking in India.

Banking in India, as in all other countries was no sudden invention and the *bania* or *mahajan* (money-lender) has been at work since remote antiquity. There is no town or village without its money lender. The real work of the *bania* in the internal economy of the country is very useful. He finances agriculture ; assists in the movement of the crops to consuming areas, or to the ports ; distributes all kinds of goods throughout the districts in which he resides ; lends money to the peasant ; accepts loans or deposits from various people in his town or village ; discounts or buys *hundies* offered by his local customers, or cashes those drawn upon him by firms well known to him in other towns. To realize the extent of his business we need only bear in mind that his short and long term loans are estimated to amount to more than 100 crores of rupees. Money-lenders are especially prominent in the Punjab. Their number is estimated to be 56,000. They are the richest single class in the province. Mr. Calvert in his "Wealth and Welfare of the Punjab" asserted "that the number of money-lenders, as well as the capital employed in moneylending in the Punjab was increasing." "There is" he says, "unimpeachable evidence that the prosperity of the agricultural classes has attracted a large number of the trading classes to money-lending."

The principal objection to the money-lender is not that he does not provide a useful economic service to the community, but that he does it at too great a cost when-

ever he charges a rate of interest which amounts to usury, which he appears to do all too often. He is in a position to take advantages of the ignorance and helplessness of the borrower and too readily advances money to the extravagant peasantry; for this he is almost compelled to charge a high rate of interest because of the risk involved in such loans for which he has little or no security; they are loans which are hardly even likely to be repaid even if attempts were made. But, because the money-lender comes into the closest touch with his clients, he can easily compete with the banks and at present appears to be an indispensable, but expensive, feature of the rural economy of India.

2 The Indian shroff is now coming into closer contact with modern banks. A small trader in a town can obtain a loan more easily from a shroff than from a bank; the former therefore finances the traders and business men by discounting hundies and obtains loans from the bank by re-discounting the hundies with them. The banks thus get an important middleman to provide security against loans advanced to business men and they have found that advancing money on shroff's hundies is one of the safest kinds of business they transact.

Suggestions have been made for the licensing of money-lenders, but the Banking Inquiry Committee of 1931 ruled out the idea as undesirable. They have suggested certain measures with a view to protect the honest borrowers and lenders. In the Punjab the Regulation of Accounts Act was passed in 1936. Under the Act the creditor is to keep regular account books and has to send to the debtor every half year a statement showing the transactions relating to the loan entered into during the six months to which the statement relates. If the creditor does not comply with the provisions of the Act

then in case he files a suit against the debtor, the court will not award him costs and may in its discretion refuse to allow interest.

The Committee recommended the enactment of similar measures in other provinces and also the fuller utilization of the Usurious Loans Act, which authorises courts to reduce the rate of interest where this appears to be too high. Special legislation is also recommended for particular classes of money-leaders like the *Pathans*, with a view to reporting such as are found to be a menace to society. The Committee were of opinion that in the interests both of the general public and the indigenous bankers themselves, their position should be strengthened. They, therefore, recommended that those who are engaged in banking proper should be eligible to be placed on the approved list of the Reserve Bank in the same manner as other banks, and that such indigenous banks must agree to keep proper books of accounts audited by recognized auditors. A further step was taken by the Punjab Government by passing the Punjab Relief of Indebtedness Act in 1934. This Act gives relief to debtors by imposing restrictions on their arrest and detention, amplifying and extending the provisions of the law of insolvency, fixing the maximum interest recoverable as equivalent to the principal amount advanced, and the formation of Conciliation Boards. According to the Act, interest rates charged by money-lenders cannot exceed $7\frac{1}{2}$ per cent per annum simple interest on secured loans and 12 per cent per annum on unsecured loans.

In 1936 the Punjab Legislature attempted to go even further by passing the Debtor's Protection Act; this further protects the agriculturist debtor by (a) transferring the powers of temporary alienation of land from the Civil Court to the revenue officers and making a statutory

provision for exemption of such quantity of land as would be sufficient for the maintenance of the judgment debtor and his family ; (b) exempting ancestral property in the hands of the heirs of such a debtor from attachment and sale ; (c) exempting trees and standing crops other than cotton and sugarcane ; (d) reducing the period of limitation for execution generally ; and (e) empowering the local government to make rules for the registration of money-lenders. The Statutory Report of the Reserve Bank of India published in January 1939 again emphasises the need of reasonable legislation for regulating money-lending and making registration compulsory for all money-lenders. The Punjab Government passed an Act for the registration of money-lenders in 1939.

MODERN BANKS

These are of comparatively recent growth in India and may be classified as follows .—

1. Reserve Bank of India.
2. Imperial Bank of India.
3. European Exchange Banks.
4. Indian Joint Stock Banks.

Imperial Bank of India.

This was formed in 1920 by an amalgamation of the three previously existing Presidency Banks with an authorized capital of 1,125 lakhs of rupees. Before the establishment of the Reserve Bank it acted as the Government's banker, collected and remitted money on behalf of the Government, issued and managed Government loans. It was precluded from making loans or advances for a longer period than six months or upon security of immovable property (mortgages of houses or land) except as collateral security where the original security was a gilt-edged security or goods which were pledged to the bank. It was not allowed to discount bills which did not

bear upon them the signatures of two persons. The bank could not undertake general business in exchange, although it made remittances for its bona fide customers.

Since the establishment of the Reserve Bank of India on the 1st April, 1935, most of the restrictions on the Imperial Bank have been withdrawn. In addition to its business as the biggest commercial bank in the country, the Imperial Bank is now the sole agent of the Reserve Bank in all places where the former has a branch and there is no office of the Reserve Bank. One hundred and two new branches have been opened in the principal towns and cities of India, and the total number of branches of the Bank is 161. The Bank has also an office in London.

Exchange Banks.

As the bulk of the foreign trade of India is with England, the exchange banks were English in the beginning, with their head offices in London. Later, branch banks of some other companies were also started. The exchange banks in India are of two classes : —

(a) Those doing considerable business in India, *e.g.*, the National Bank of India, the Peninsular and Oriental Banking Corporation and the Chartered Bank of India.

(b) Agencies of large banks doing business all over Asia, *e.g.*, the International Banking Corporation, Imperial Bank of Iran, Yokohama Specie Bank, Banco National Ultramarino. These banks deal in bills drawn against goods exported mostly at three months after sight. The bills are called D. A. (Documents against Acceptance) or D. P. (Documents against Payment) and most of them are drawn on London. The Indian branches of the exchange banks purchase these bills and send them to their offices in London where they are held until retired or paid on maturity.

Indian foreign trade is thus financed mostly by funds raised in foreign countries, but these exchange banks have also begun to attract deposits from the Indian people and it was suggested by the Banking Inquiry Committee that, on the formation of a Central Reserve Bank, the Imperial Bank should be permitted to do exchange business, or an Indian Exchange Bank might be set up by the Government with capital supplied by the joint stock banks.

Due to the efforts of the late Sir Pochkhanewala a Central Exchange Bank has been established in London in Sterling Capital, in 1936.

Indian Joint Stock Banks.

Joint Stock Banks have been in existence in India for the last seventy years or so. In 1870 there were only two such banks but the number of these banks having capital and reserve of one lakh or over rose to 84 in 1933 with a paid-up capital of 860 lakhs, and deposits of 7632 lakhs of rupees. Of these banks four, viz., the bank of India, the Allahabad Bank, the Central Bank of India, and the Punjab National Bank are the more important ones. The latter two are managed entirely by Indians. Joint stock banks in India are not only very few but also usually very small; the deposits of any one of the big joint stock banks in England exceed those of all the Indian banks put together.

These banks conduct the ordinary business of banking and their chief function is to attract deposits from the public by paying interest on current accounts, savings fund or fixed deposits. On the strength of these deposits, loans are made to people on various securities, such as jewellery, bullion, government paper, pro-notes, mortgages, joint promissory notes, piece goods and collateral title deeds, etc. These bank also do the work of collecting

bills and drafts, purchasing and selling government securities and other stocks and shares, buying, discounting, and collecting *hundies*, realizing pay bills, pensions, etc. As has been said the cheque system is not yet developed much in the country. The Indian joint stock banks do most of their business in big towns and they have not made much progress in pushing their business into moofussil areas. The work of supplying the needs of the mass of the village population is in the hands of the money-lenders.*

Reserve Bank of India.

In India the control of currency and of credit before the formation of the Reserve Bank was in the hands of two distinct authorities whose policies were widely divergent and in which the currency and banking reserves were controlled and managed separately. Such a system was necessarily defective. It is essential that the commercial banks should be able, when necessity arises, to turn a maximum of their assets into cash, with a minimum of disturbance to general conditions. It is only through the establishment of a central banking system with the facilities for rediscounting it affords, that this end could be achieved. The commercial banks can re-discount their short term bills with the central bank (which is the banker's bank) and can thus convert their advances against goods into a quick asset, capable of prompt realization in times of stress.

"The economic history of the great trading nations of the world during the last half century demonstrates clearly

*Compared with other countries the number of banks in India is wholly inadequate to the real needs of the country as the following table will show :—

Country.	Number of banking Offices		
	Total (approx)	Per million of Population.	Per 2700 square miles.
U. K.	12,557	285	362
U. S. A	30,009	256	20
Japan	7,500	92	80
Canada	5,000	448	3
India (1983)	1,067	3	1.5

the high efficiency of the system and its benign influence upon economic progress, whenever it has been introduced. The U.S.A. has been one of the last to adopt it. There are not a few students of financial affairs who hold that if it had not been for the timely introduction of the Federal Reserve System in 1914, it is doubtful whether America, in spite of its enormous economic advantages, could have weathered the stress of the Great War without grievous harm to its financial structure."

Central banks in other countries work under charters which, though differing in detail, are very similar as regards their fundamental lines. In general they are entrusted with the sole right of note issue and the responsibility of maintaining the stability of the currency. They are the custodians of the currency and banking reserves and of the cash balances of the governments. Their business, in the main, is confined to dealing with the banks and the Government.

Such a central bank was felt to be necessary for India also and the Hilton Young Committee on Indian Currency and Finance carefully examined this question. They recommended the establishment of a central reserve bank to act as a state bank*.

It should

- (i) have the exclusive privilege of note issue.
- (ii) manage government funds and balances.
- (iii) handle government remittances to and from India.

*They did not approve of the suggestion of converting the Imperial Bank (which is now performing one or two of the functions of a Central Bank) into a Central State Bank on the ground that the Imperial Bank would then be precluded from undertaking a great many tasks which it now does successfully as a Commercial Bank. The country would then lose the benefit of the elaborate and wide-spread organization which has been set up through the length and breadth of India to make available to the community the increased commercial banking facilities which are so urgently needed, and to assist in fostering among the people as a whole the habit of banking and investment.

(iv) hold a definite proportion of the security reserve of all joint stock banks, such proportion being determined by statute.

In pursuance of the recommendations of the Committee a bill to establish a Reserve Bank in India was passed by the Legislative Assembly and Council of State and received the assent of the Governor-General in March, 1934. The Reserve Bank of India was officially inaugurated on April 1, 1935, and opened its offices at Bombay, Calcutta, Delhi, Madras and Rangoon. Latter arrangements were made for starting a London branch as provided for by the Act. The Bank has been constituted for the purposes of taking over the management of the currency from the Governor-General in Council. The original share capital of the Bank is five crores of rupees divided into shares of Rs. 100 each, which are fully paid up. The general superintendence and direction of the affairs and business of the bank is entrusted to a Central Board, composed of a governor, two deputy governors, four directors and one government official to be nominated by the Governor-General in Council and eight directors to be elected on behalf of the shareholders. Some of the important functions of the Bank are to accept money on deposit without interests, to purchase, sell and rediscount bills of exchange and promissory notes with certain restrictions, to give loans and make advances, repayable on demand or not exceeding 90 days, against security of stocks and funds, etc. The Bank acts as an Agent for the Secretary of State in Council, the Governor-General in Council or any Local Government or State in India for the purchase or sale of gold or silver; for the purchase, sale, transfer and custody of bills of exchange, securities or shares; for the collection of proceeds, whether principal, interest or dividends, of any

securities or shares, for the remittance of such proceeds by bills of exchange payable either in India or elsewhere. and for the management of the public debt. The Bank has the sole right to issue notes in British India and the Governor-General in Council does not now issue any currency notes since this right has been transferred to the Bank and is conducted by the Bank in an Issue Department which is kept separate and distinct from the Banking Department. The Bank has also a department for dealing with loans to agriculturists. In addition to this the Bank accepts monies for the account of the Secretary of State in Council and of Local Governments and carries out their exchange, remittance and other banking operations including the management of public debt, on such conditions as are agreed upon. The bank sells to, or buys from, any persons who makes a demand for sterling for immediate delivery in London at a certain fixed rate, provided that no person is entitled to demand or buy or sell an amount of sterling less than ten thousand pounds. The Imperial Bank of India is the sole agent of the Reserve Bank at all places in British India where there is no branch of the Reserve Bank.

The Bank was required to submit within three years of its being set up a report on the following matters :—
(a) The extension of the bussiness of the Act relating to scheduled banks to persons and firms not being scheduled banks engaged in British India in the bussiness of banking and (b) the improvement of the machinery for dealing with agricultural finance and method for effecting a closer connection between agricultural enterprise and the operations of the Bank. The Bank issued reports in January 1938 in which it is pointed out—

(a) That agriculture in India is not so much a profession as a mode of living and that before credit

can become freely available to the agriculturist, he must be made credit-worthy which can be done by supplying credit through educative credit agencies like co-operative credit societies which should be reconstructed and revitalized so as to serve not only as effective credit agency but as a motive power for improvement of agriculture from every point of view.

(b) That if there is reasonable legislation for regulating money-lending and making registration compulsory it may be possible for the Bank to deal with licensed and approved money-lenders.

(c) That the Bank being the Banker's bank cannot lend to agriculturists direct or supply normal finance to any of the credit agencies nor can it play the same role as Government in the matter of agricultural credit, it can come into the picture only when the ordinary pool of commercial credit appears inadequate to meet reasonable business requirements of the country.

(d) In order to make finance for the marketing of crops available to a much larger extent the Bank suggests that advances made by the money-lenders to the agriculturists on the security of the crops or produce should be drawn in bills in such a form that they could be discounted with the scheduled banks as to be available for rediscount from them by the Reserve Bank. The Bank is prepared to rediscount such bills at special rates by grant of rebates if the advantage of such rebates is passed on to the cultivators.

The following statements show the accounts of the two Departments on 21st March 1941.

RESERVE BANK OF INDIA

(BANKING DEPARTMENT)

Week end on the 21-3-1941

LIABILITIES		ASSETS	
	Rs.		Rs.
Capital paid up	...	Notes.	11,25,24,000
Reserve fund	..	(a) Legal Tender in India	34,83,000
Deposits :—		(b) Legal Tender in Burma	6,38,000
(a) Government	...	Rupee coin	3,62,000
1. Govt. of India	27,29,58,000	Subsidiary coin	3,25,000
2. Govt. of Burma	3,95,22,000	Bills purchased and discounted	78,35,20,000
3. Other Govt. accounts	8,46,88,000	Balance held abroad	11,25,000
(b) Banks	...	Loans and advances	6,30,57,000
(c) Others	...	Investments	1,58,97,000
Bills payable	...	Other assets	...
Other liabilities	...		
Total	...	Total	98,59,31,000

21-3-1941

ISSUE DEPARTMENT

CREDIT AND BANKING

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LIABILITIES		ASSETS	
	Rs.		Rs.
Notes held in the Banking Departments ...	11,60,07,000	A. Gold coin and Bullion Held in India ...	44,41,43,000
Notes in circulation ...	2,38,98,51,100	Starting Securities ...	140,50,11,000
Legal tender in Burma ...	17,27,07,000	B. Rupee coin ...	33,32,23,000
		Govt. of India rupee securities ...	49,61,88,000
Total ...	2,67,85,65,000	Total ...	2,67,85,65,000

Hoarding Habit in India.

Hoarding is the term used to describe the habit of keeping money in the form of coin or specie, or gold and silver jewellery in the home. It means that the savings of the people are not invested in profitable undertakings but are kept idle. Such a habit usually prevails in a community where there is no settled government and therefore no security of life and property, or where there are no facilities and inducements for investment. The habit of hoarding has been common in India for many centuries and it still exists here more than in other civilized countries. India has been regarded as a "sink" for the precious metals and the hoards here have been estimated at £1000 million sterling (over 1300 crores of rupees *).

Reasons for Hoarding. The reasons given for the existence of the hoarding habit in India are :—

1. The country has been subjected to numerous invasions in the past and has suffered a good deal from political disturbances, misrule and insecurity. The habit contracted in times of insecurity continues to survive in times of well-established government, peace and security.

2. The defective system of Indian currency creates a suspicion in the minds of ignorant persons that the government wishes to secure their gold and silver and so they cling to the metals.

3. The ignorance of the people, their conservative habits and lack of enterprise generally.

4. The absence of satisfactory banking and investment facilities in the country.

Evils of Hoarding. Hoarding is an economic evil ; it is an indication of a backward economic life as it implies that the people among whom it prevails do not know how

*This contention has lost much of its force owing to the export from India of over 311 crores worth of gold between September 1931 and February 1933. On the other hand U. S. A. and France have commenced the hoarding of gold.

to utilise their capital and reserves productively; they lack confidence and enterprise. Indian capital is proverbially "shy"; although there is much wealth in the country, people do not invest it in industrial undertakings. Indian railways mines and industries, have been developed by the aid of foreign capital on which interest has to be paid and thus the control of industry and trade passes into the hands of the foreigners from whom the money is borrowed. Hoarded wealth not only lies idle but also deteriorates, while invested wealth grows and enriches the community if it is properly utilized. The introduction of a sound currency system and the development of banks is hindered in a community where the habit of hoarding prevails. How can banks carry on, if people do not deposit their money in them? How can a government introduce a free gold currency if the coins will pass into the hoards almost immediately and do not remain in circulation?

Fighting the Hoarding Habit.

The question of tempting the hoards into productive employment has occupied the attention of the Indian government and philanthropists for very many years. Various suggestions have been made for improving the present banking organization and also at the same time, for fighting the hoarding habit. The post-office has been utilized as an agency for promoting the habit of investment and the number of post-office savings banks have gradually increased (up to 13,000 in 1934), while the total deposits amounted to 522·3 millions of rupees. The post-office cash certificates issued by the government have been successful, and it is suggested that the facilities should be extended and developed to the fullest extent by such means as the issue of gold certificates and the provision of special facilities for women to invest in the post offices. The success of the loans floated by the government during the Great War showed that Indian people have begun to realize the benefits of investment.

The imports of gold and silver have declined recently and this is another welcome sign of an increase of the investment habit, but much still remains to be done. We have seen how inadequate and backward the banking system of the country is at present; widespread education and propaganda in favour of the advantages of the adoption of sound banking methods and a much greater existence of banking facilities is necessary.

RURAL INDEBTEDNESS

Nature and Extent.

It is generally agreed *that rural indebtedness is very large and that the Indian peasant is hopelessly in debt.* The main existence of this crushing burden is probably one of the main causes of the backwardness of Indian agriculture; the debt is unproductive, its burden is carried down from father to son and is frequently increasing from one generation to another in the same family.

(a) *Estimates.* No reliable estimate of the total agricultural debt of India as a whole has yet been made but certain estimates of rural debt in different provinces have been attempted. The famine commissions of 1880 and 1901 inferred from the evidence before them that two-thirds of the landowners were heavily in debt, that half of them were inextricably involved and that several of them had lost possession of their lands. Sir Fredrick Nicholson estimated the total rural debt of Madras at 45 crores of rupees, and on that basis Sir Edward MacLagan calculated the total agricultural debt of British India to be about 300 crores. Mr. Darling estimated the rural debt of the Punjab in 1923 at 90 crores, in 1929 at 135 and in 1934 at 200 crores.* On the basis of the first estimate the figure for the whole of India would be about 600 crores.

* Sir Jogindar Singh Minister for Agriculture, Punjab, in a speech in the Punjab Legislative Council in March, 1932, stated that Punjab's agricultural debt was 140 crores which, if measured in terms of commodities when prices had greatly fallen, had increased threefold.

Punjab. The Punjab is more heavily in debt than the other provinces and Mr. Darling sums up the results of the inquiries regarding the extent of the indebtedness of the Punjab peasant as follows :—

1. Only 17 per cent. of the proprietors of land in the province are not in debt.

2. The average debt per indebted proprietor is 463 rupees.

3. The proprietors' debts amount to 75 crores of rupees.

4. The larger proprietor is more heavily in debt than the smaller, but the latter is more heavily involved.

5. Debt is almost as widespread among tenants as proprietors, but lower in amount, averaging about Rs. 150 per family.

6. The total agricultural debt of the province averages Rs. 31 per cultivated acre and Rs. 76 per head of those who are supported by agriculture.*

The above figures are alarming, particularly in view of the low incomes of the people, and because the debt is increasing. The seriousness of the debt, however, does not lie so much in its extent as in its nature ; it is not only huge but also unproductive. Less than five per cent. of the debt of the Punjab is estimated to have been borrowed for productive purposes. Further, unproductive debt is generally borrowed at a high rate of interest, since the rates usually vary with the need and helplessness of the borrowers. The debtors are unable to pay the heavy debts incurred and their burden goes on automatically increasing.

(b) *Credit is Easy and Unorganized.* The debtor is generally poor ; he cannot obtain loans from banks or organized loan agencies, and has to resort to the money-lender. The latter is usually astute, much cleverer than the

*"The Punjab Peasant in Prosperity and Debt" pp 20-21.

peasants with whom he deals, and frequently, in order to get men into his clutches, encourages them to borrow. He lends money far more easily than the recognized banks but tries to keep the debtor always in his grip. The latter knowing that he can borrow easily, becomes extravagant and an habitual borrower.

Causes of Rural Indebtedness.

The most important reasons for the heavy debts of the Indian peasants are :—

(i) The yield from the land is small and the agriculturist has little capacity to save. It has been mentioned previously that agriculture is the mainstay of about 70 per cent. of the population of India and the pressure of population on the land is heavy. Where the soil is fertile and the rainfall is sufficient, there we find the population very thick on the land and holdings very small. Good agriculture is difficult because the holdings tend to be split up into innumerable fields scattered about each village.

(ii) The income of the agriculturist is realized only at the harvest time, but he has to spend throughout the year. He is idle in many cases for several months each year and has no subsidiary industry on which to fall back.

(iii) The earnings of the agriculturist are very uncertain. "The monsoon may fail, rain may come at the wrong time, or a river may rise and sweep away harvest, hamlet and herd. It is usually reckoned that a cycle of five years will give one good year, one bad and three that are neither good nor bad, and it is only in good years that the ordinary small holder pays his way without a loan. In a bad year he will have to borrow for nearly everything he wants; for seed, cattle and clothes and even for much of his food.

(iv) The cultivator lives in the midst of unhygienic and unhealthy surroundings, and consequently he is frequently a prey to disease. Malaria is very common, and this not only keeps him out of work when his labour is most needed, but it also lowers his general efficiency.

(v) The cattle of the agriculturist are his main stock and they are as much prone to disease as he is himself, perhaps even more so; there are consequently recurring losses of cattle from drought and disease.

(vi) *The Indian peasant is usually improvident and extravagant*; he takes upon himself expense which he cannot really afford, such as marriage before he can provide for a wife and family. He spends much more on the marriage and other social ceremonies than his means allow. In some prosperous districts in the Punjab, a good deal of indebtedness is due to drink, gambling and the litigious habits of the peasantry. Large sums are spent also on the purchase of brides in many areas. All over India the great majority of agricultural debts are due to improvident and extravagant expenditure on domestic ceremonies, particularly marriage.* The burden of social ceremonials is continual and heavy, and unfortunately there are at present very few signs of it diminishing.*

(vii) On the top of all this there is the *facile credit*, which encourages extravagance. The more easily a person can borrow, the more rapidly will he spend; the wiles of the money-lender often place the poor and ignorant peasants entirely in his hands and leave them at his mercy.

Measures for Reducing Indebtedness.

The problem of rural indebtedness attracted the attention of the Government of India in the early seventies of the last century and several measures have been adopted since then to try to remedy the evil. Steps have been taken to educate the cultivator and to increase his resources and productive capacity. Facilities for the invest-

*The village surveys conducted by the Board of Economic Inquiry, Punjab, show that 59 per cent of the indebtedness is for personal expenditure (20·6 for family expenses such as food and clothing; 15·9 ceremonies; 15·8 payment of old debts; 3·6 litigation and 3·6 miscellaneous, which include buying of milch cattle, house building and bribes to officers) and 41 per cent productive (17·5 for purchase of plough cattle, seed, fodder, well and implements; 3·7 payment of land revenue, water rates and *taccavi*; 10·3 for business purposes; 2·4 for buying of land and 7·0 miscellaneous for redemption of land, well repairs and wages paid in advance.)

ment of savings have been provided in the post-offices, and measures like the Usurious Loans Act, the Deccan Agriculturists' Relief Act, Punjab Regulation of Accounts Act, the Relief from Indebtedness and Debtors' Protection Acts have been passed in order to protect the borrowers from the money-lender. The Punjab Alienation of Land Act was passed in order to restrict transfers of land and to save the lands of the agriculturists from passing into hands of non-agriculturist money-lenders. The scope of this Act has been enlarged by recent legislation and the Restitution of Mortgages Act has been passed in 1938 providing for restoration of lands mortgaged prior to 1901 to Debtors on easy terms.

The state has directly assisted the agriculturist by advancing him *taccavi* loans for productive purposes, on low rates of interest and also by remitting the land revenue in years of stress. The Banking Inquiry Committee suggested that it is necessary to extricate from debt those peasants who are hopelessly involved. A scheme of conciliation on a voluntary basis was recommended with officers appointed in each province to persuade the lender and the borrower to agree to the redemption of old standing debt. In some cases the Committee even recommended compulsory settlement.

The government of the United Provinces has recently set up an Agricultural Debt Committee and it is proposed shortly to introduce into the Central Provinces Legislative Council a bill to set up conciliation boards for reducing the burden of agricultural debts in that province. The Punjab Government passed the Relief from Indebtedness Act in 1934 which gives protection to the debtor against arrest and imprisonment in certain cases, extends the provisions of the law of insolvency and provides the machinery of Conciliation Boards. Debt conciliation measures or such other measures as have the effect of scaling down debts cannot be considered very fruitful except as emergency devices and an

attempt to solve the deadlock in agricultural credit which has taken place owing to the fall in prices.

Co-operative Credit Societies.

The most important constructive measure adopted has been the development of co-operative credit societies on the model of the Raiffeissen banks of Germany and the credit societies of Holland and Denmark. The financial conditions of the farmers of those countries were somewhat similar to the Indian conditions about the middle of the last century as the farmers and artisans were often a prey to the money-lenders. Two Germans named Schulze-Delitsch and Raiffeissen started credit societies; the former in the towns to improve the conditions of the artisans and the latter in the villages for the benefit of the peasants. Their object was not only to remove indebtedness but also to infuse among the common people a spirit of self-reliance and thrift, and the societies have been very successful. In India, Sir Fredrick Nicholson, who had made a special study of agricultural banks in Europe, suggested the idea of introducing co-operative credit societies on the model of those of Germany, and the Co-operative Credit Societies Act was passed in 1904, providing for the formation of such organization in India.

The principles of Co-operative Credit. The agriculturist is poor and he must borrow; he is extravagant; his debt increases; he can command little real credit and yet he can borrow very easily. He goes to the money-lender of his village and usually gets a loan easily. The terms, however, are often harsh, and a poor tenant cultivator cannot get a loan from any recognized banking institution at even six or seven percent. interest. In fact no good bank will be prepared to advance money to him at all because he has no credit; he is known to be extravagant; his means are very limited and he is likely to be unable to repay the loan whenever the bank may make a demand. The risks of lending to him are great, and no bank can afford to take such hazards with public money and lock it up in

long term advances. The bank's officials cannot keep any proper supervision over him to see how he spends money.

Suppose, however, that ten such people, who live close to each other and know each other's affairs intimately, join together. They may then go to a bank and ask for a loan for one of them ; they all assure the banker that the loan is required for a genuinely productive purpose ; they tell him that they will see to it that the money is properly utilized and will be repaid regularly at the agreed time, say when the crops are harvested and sold. They also assure the banker that if the money is not duly repaid they will all be responsible for the loss. The money may then be recovered from the property of all, or any of them. In such a case there is no reason why the bank should not be prepared to lend the money on a fairly low rate of interest as the risk is considerably reduced. People with little credit can, by thus joining together, secure credit.

Constitution of Co-operative Credit Societies.

That is the principle on which co-operative credit societies are based. Any ten or more persons may join together to form a society and have it registered, provided the members are of the same tribe, or caste, or from the same town. In the case of rural societies the liability of the members is unlimited, and joint and several ; in the case of urban societies it may be limited. No dividends can be paid to members and profits are to be carried to reserve fund, unless otherwise directed by the Co-operative Department. Capital must be raised as far as possible from the savings of the members and their neighbours. Each member is entitled to one vote only in decisions as to the government and policy of the society. Loans can be given to members only and for nothing but productive purposes and only after a careful scrutiny. Proper vigilance must be exercised after the advance is made and punctual repayment of the loan enforced. Office holders are to be honorary, and not paid servants of the society. Registrars were appointed in all the provinces of India to exercise

supervision over the organization and control of the societies, to which government gave special facilities but reserved certain powers in respect of compulsory inspection, audit, and dissolution and also in general guidance and control.

Progress of the Co-operative Movement.

The movement soon took deep root in the country and made rapid progress. In 1912 there were 8,177 societies with 403,318 members and Rs. 3,35,74,162 as working capital. The success of co-operative credit organizations paved the way for distributive societies. For the financing of the former, Co-operative Unions and Central Banks gradually developed. In 1912 another Act was passed permitting the formation of co-operative societies for purchase, sale, production, insurance and other objects. It also recognized three kinds of central societies in addition to the primary societies, viz.

- (i) Unions of primary societies for mutual control and audit.
- (ii) Central banks for finance, consisting partly of societies and partly of individuals.
- (iii) Provincial banks with individual members.

The passing of this Act gave a fresh impetus to the Movement and the number of societies gradually rose to 1,07,257 with 45,80729 members and 1,00.08 lakhs of rupees as working capital in 1935 36. There were 94,433 Agricultural Societies in India with some 30,50,334 members and a share capital of 4318000 rupees. The provision of co-operative credit societies has been particularly successful in the Punjab.

The benefits conferred by the Movement on the people have been very considerable. Not only have these societies brought cheaper credit to the cultivator but they have striven to inculcate the lesson that cheap credit is only valuable if applied to productive purposes. The societies have encouraged thrift and adult education, checked the evil of excessive drinking, improved the morals of the

people, discouraged extravagance on social occasions, freed many poor people from the clutches of the money-lender and reduced the rates of interest in the villages. Saving has been encouraged and business habits among the agriculturists have been created and fostered. A spirit of unity has been inspired and this has reduced the amount of litigation. Owing, however, to the ignorance and illiteracy of the people the movement has not spread as widely as might be desired in view of the principle on which it is founded, *viz.*, "Each for all and all for each."

Though societies working on this principle provide a good training ground for democracy and civic virtue, their practical working is not free from difficulties. It is to be hoped that it will be possible to extend the Movement further with the growth of knowledge and education, and also to extend its activities as widely, in some other directions of co-operative effort, as has been done in the case of the provision of credit, which is only one of the almost innumerable ways in which co-operative principles may be applied.

SUMMARY

Credit in Economics implies confidence—that if a thing of value is given to a person, without a present equivalent return, it, or its equivalent, or a little more, will be returned in future. Credit often takes the place of money. Its constituent elements are (a) time, and (b) confidence in the solvency of the borrower. A third element is sometimes present, *viz.*, a written evidence of debt called an instrument of credit.

Credit is so highly developed and well organized in modern industrial communities that we are said to have passed from the stages of barter and of a money economy to that of a credit economy. Credit performs a very useful function as it supplies money to those in need of finances, agriculture and industry, utilise idle funds, facilitates trade and commerce, and economises the use of the precious metals.

The organization of credit consists of (a) Banks and Clearing Houses, (b) Instruments of Credit, *e. g.*, Cheques, Bills of Exchange and Notes.

Banks are the institutions which organize capital. Their functions are the deposit and borrowing of money, discounting of bills, lending money and issue of notes. The latter function is the privilege of very few banks, but borrowing and lending are carried on by all banks. By the exercise of these apparently simple functions the banks play an important part in the regulation of the flow of the capital to productive enterprise, financing of trade, industries and commerce and transmission of money from place to place. They also exercise considerable control

over the monetary system, internal and foreign trade, distribution of the precious metals, the growth and development of industries and commerce.

Banks attract money from the public by the payment of interest. Deposits may be (a) Current Account, payable on demand, (b) Saving Fund, repayable in small amounts after short intervals, (c) Fixed, repayable after stipulated periods of time, say three, six or twelve months, (d) Cash Credit, which are created not by paying cash to the bank but by merely treating the loans or advances made by the banks to their customers as deposits against which the borrowers have the right to draw orders payable on demand.

Such orders are called cheques, i.e., orders for payments of specified sums of money on demand which are as good as cash, for any one who presents them to the bank on which they are drawn can obtain cash on demand. Cheques may thus rapidly pass from hand to hand like cash and serve as money. They not only postpone the passing of coin but obviate its use to a large extent, because, when one person takes a cheque from another and sends to his bank, the loan of one person creates the deposit of another. As there are several mutual transactions, those which are common cancel each other and cash has to pass only in the liquidation of a few transactions. The mutual indebtedness of the banks is settled at the Clearing Houses set up by themselves.

The banks do not keep idle the money which is deposited with them but lend it out on interest and the margin between the rates charged and those paid by them provides the banks' profits. Bankers have usually the temptation to invest large amounts of their assets in long term loans, but this must be avoided, for the whole secret of safe and successful banking lies in the prudence which the bankers exercise in investing their funds. A banker should so invest his funds as to be prepared always to meet claims made on him, i.e., he should invest his funds in such securities as are easily realizable either on a fixed date or at short notice.

Bills of Exchange provide the most reliable securities for this purpose. They are orders drawn by one merchant on another. A foreign bill is usually drawn against the security of bills of lading (which is a document of title to goods shipped) asking the one receiving the order to pay a definite sum of money to a specified person or his order, or to bearer, after a specified time. Bills of exchange also pass from hand to hand like cheques and can be deposited with any bank for collection. When a banker pays money on the security of a bill before maturity, he is said to discount it. By discounting bills banks help in the remittance and transfer of money from one place to another and so finance domestic and foreign trade.

They may also advance money to industrialists and agriculturists for more or less permanent investment, but many people consider that such banks should be distinct institutions and that commercial banking should not be combined with industrial or agricultural banking.

All local agencies for dealing in money are collectively called the Money Market. The Indian Money Market consists of the indigenous bankers as well as modern banks.

The indigenous banker represents the unorganized market which consists of the *mahajans*, *baniyas* and *shroffs* who work as money-lenders in Indian villages and towns. They advance loans mostly to agriculturists but frequently charge usurious rates for loans, by discounting *hundis* they finance internal trade and, are being gradually linked with the modern banks among which the

Imperial Bank of India plays the most important part in this country. Then come the Exchange Banks and the Joint Stock Banks. Modern banking in India, is, however, still in its infancy and much of India's wealth is still in its hoards.

The problem of rural debt is of great importance in India as it is not only huge but also unproductive, unorganized and growing; loans are much too easily obtained.

The development of co-operative credit is intended to help in the solution of the problem of rural indebtedness. It tends to encourage self-help, thrift, mutual co-operation and education. The co-operative movement has taken a firm hold and has done considerable good to the country.

Questions and Exercises.

1. What is credit? How do banks convert it into cash?
 2. What part does credit play in the modern industrial system? Why do some people command more than others?
 3. How would you organize the credit of village peasants so that they might be able to obtain loans from the Imperial Bank of India?
 4. Draft a specimen balance sheet of the Indian Joint stock bank and the various items.
 5. Make a study of the work of a joint stock bank, or an exchange bank, or any branch of the Imperial Bank in your town.
 6. What are the fundamental principles of co-operative credit? Examine their working in a co-operative society in an Indian village.
 7. Write an essay on "The Indian Money-lender." How does the Regulation of Accounts Act affect him?
 8. "Loans create deposits."—Explain the statement.
 9. If you were a banker, how would you invest your funds?
 10. How do banks help in the transmission of money from one place to another in (a) the same country. (b) different countries?
 11. How do banks settle their mutual indebtedness?
 12. Make a list of the big banks in India and collect figures showing their authorised, subscribed and paid-up capital; their total deposits, cash reserves and the nature of their investments.
 13. Why have industrial banks not developed in the country?
 14. Collect the following facts regarding the debts in any Indian village:—
 - (a) Amount for different classes of persons.
 - (b) Purposes for which money is borrowed.
 - (c) Securities against which borrowed.
 - (d) Rate of interest paid.
 - (e) When borrowed and when repaid?
 - (f) From where borrowed?
- What conclusions do you draw from these facts?
15. Trace the course of a bill of exchange from its inception to its final discharge. How does a bill of exchange differ from a *hundi*?

16. How far has the cheque system developed in India? What are the reasons for the scanty circulation of cheques in the country?

17. What is a banker's Bank? Describe its functions.

18. Enumerate the different ways in which one can send £100 to England.

19. What do you anticipate will be the effect of the Debtor's Protection Act on money-lending business in the Punjab?

20. Discuss the importance of a good system of Banking to an industrial community? (P. U. 1993.)

21. Write a short note on the development of co-operative credit in India? Is there any scope for further development? Discuss. (P. U. 1934-36.)

22. What do you understand by the Reserve Bank of India? What are its main functions? (P. U. 1936.)

23. Though generally hated, the village money-lender is essentially as good a banker as any other and the progress of India depends on recognizing his importance and developing his work on modern lines. Do you agree? Give reasons for your answer. (P. U. 1936.)

24. How does a bank make a profit? What is meant by a "run upon a bank"? In what cases may a run upon a bank cause its failure? (P. U. 1935.)

25. Hoarding is an economic evil and so is extravagance. What exactly should one do? (P. U. 1935.)

26. What is the importance of the Post Office Savings Bank in India? (P. U. 1937.)

27. What is "co-operation"? Why is great importance attached to development of co-operative credit in India? (P. U. 1939.)

28. What are the banking operations from which commercial banks generally derive their income? (P. U. 1939.)

29. Briefly mention some of the more important functions of banks. How does a bank create credit?

SECTION IV
DIVISION OF THE PRODUCT
CHAPTER XXI
DISTRIBUTION

Nature of Distribution.

Distribution is not division from a common stock although the word does, perhaps, suggest the idea that all the wealth produced through the co-operation of the various factors of production is brought to a common store-house, from which it is doled out to the consumers according to some standard. Distribution in old village communities was of this kind and even to-day in an Indian village, the produce of a harvest is divided, to some extent, on the threshing floor among the various classes of producers according to fixed rules. The problem of distribution in such cases is very simple.

Generally speaking, we find that the farmer does not produce for home consumption alone, but for a market. He finds, say, a cotton crop more remunerative than wheat, and he sells the whole stock when it is picked. He is paid its price in money according to the market rates for his particular crop. On receiving the money, however, he does not call together the labourers and artisans who assisted him in producing the crop and divide the cash among them. He may in some cases, divide the original produce in that manner, but not the cash payment. The sharing of the wealth produced is not so simple as that. The farmer has perhaps already paid wages to the labourer and the artisan who have then no further interest in the product. If a man grows the crop on his own land, puts in his own capital, labour and brain work in production, he will keep the whole produce for himself, or the money,

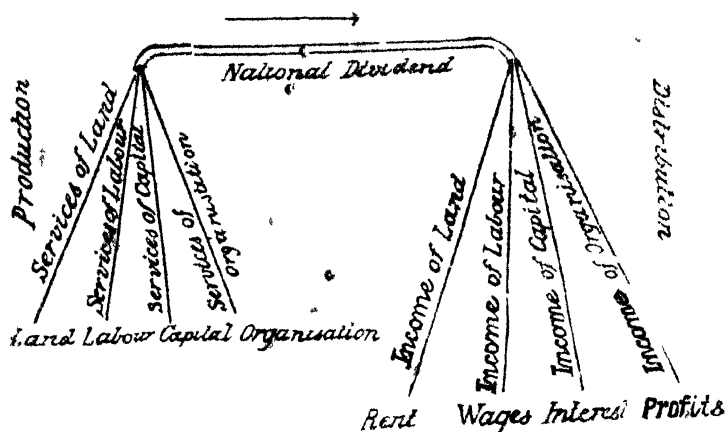
or other things which he receives for it. If, however, he employs a labourer to assist him he will have to pay him a wage for the work. The produce may be marketed after a long period, but he has to decide, and probably pay, the labourer's wage immediately, the amount of which is settled by bargaining between the labourer and employer. If the farmer has no money with which to purchase bullocks, he must borrow capital from a money-lender or bank at an agreed rate of interest. Similarly, if the cultivator has no land of his own on which to work and has to take it from a landlord, he will have to pay rent for the use of the land.

Services and Incomes.

Income. The labourer does not sell himself, but his services, as labour power; he only supplies a flow of productive energy for a given length of time. Similarly, the lender of capital and the landlord supply a flow of utilities from their goods for a definite period. The flow of utilities yielded by the various factors of production is called "services" and the regular periodical remuneration for these services is "income."

Production and distribution may be likened to the drawing of water from tanks by means of a siphon pipe with four mouths. Each mouth opens into a different tank and the water is drawn up by the efforts of the productive agents in each tank and flows as a joint product of their efforts. The flow is split up into four shares as soon as it is directed towards the four agents that contributed to its making.

The problem of distribution in a modern community is a study of the flow of wealth produced (in the form of earnings) towards those who join in its production; it may be considered under three heads.



(i) What is to be Distributed ?

A confectioner makes sweets not for his own consumption usually, but for sale. He may sit in the midst of his sweets all day, perhaps without even tasting any one of them. The shoemaker makes shoes day after day, but seldom makes a pair for himself; the lawyer prepares the cases of others and not his own. The contribution of all such producers may be imagined as being continually added to a vast reservoir of wealth which is full of the contributions of all the productive units of a nation and represents the national dividend. The late Professor Marshall defined the national dividend as the "net aggregate of commodities, material and immaterial, and services of all kinds which the labour and capital of a country, acting on its natural resources, annually produce."

(ii) Who is to share the product ?

From the total of the social dividend flow the several shares to land, capital, labour and enterprise, in the form of rent, interest, wages and profits. It should be borne in mind in discussing the distribution of the national dividend that we are concerned primarily with its apportionment among the several factors of production and not with its distribution among individuals. Although we speak of the land-

owner as receiving rent, the worker his wage, and the capitalist interest, yet it is impossible, to analyse the problem of distribution in so far as it applies to each man, woman and child ; it is possible, however, to aggregate the individuals in a community, into appropriate classes corresponding to the four factors of production.

(iii) What determines the share of each group or each individual ?

Here we have to consider how the services of land, labour, capital, and organization are evaluated. It has been stated above that the producer who obtains the things employed in production will settle their prices by bargaining, and under competitive conditions the price of each factor will be determined by market conditions. When an entrepreneur employs labourers he decides how many he will employ by considering how much each will produce for him, and by what he has to pay to each man. He will find it profitable to employ any labourer who produces more than he is paid. The organizer will compare the product with the payment and will not hire labour beyond the point where the estimated productivity of the worker is at least just equal to the price paid for his services. It is the estimated marginal productivity of any factor of production that determines the demand for it.

Suppose, however, that an employer considers it just worth his while to employ four labourers at two rupees a day each, because he estimates that each man can do at least two rupees worth of work for him in a day. He finds, however, that although he might be willing to pay two rupees a day to a labourer, there are so many candidates for employment that equally good workers are prepared to accept eight annas a day each. Supply then will also affect wages (as it does always), and the prices of the services of the agents of production are determined by the forces of demand and supply just as the prices of all other commodities.

If this is true, why then should there be a separate theory of distribution? There is difference, however, in the manner and the extent to which the supply of the factors of production adjusts itself to the demand in the long run. If the demand for caps rises, more will probably be produced and, in the long run, the tendency will be for the price of a cap to come down to the level of the cost of its production. If, however, the demand for labourers rises, how are more labourers to be produced, and what is the cost of production of labour? If demand for land rises, can new land be produced by man? Land, labour, capital and organization have no easily determinable expense of production and hence the forces that determine their supply have to be studied separately in each case.

INTEREST

Interest is a payment for the use of capital and it should be clearly understood that in Economics the use of the term is confined entirely to the payment made for capital *i. e.*, for the loan of wealth for productive purposes. In everyday conversation we call the high, or usurious, rate paid by a villager for money borrowed for his marriage as interest also, but this is not pure, or economic interest. Even where a cultivator borrows money for the purchase of plough bullocks at a high rate of (what is called) interest, the whole of the payment is not pure interest. In it there may be distinguished a number of quite separate services for which payment is being made in the form of gross interest, which is really made up of:—

1. *Net or economic interest. i. e.*, the payment for the use of capital only.

2. *Insurance against risk.* A lender may lose his money and he has to judge whether the person to whom he is lending is prudent or improvident, whether the business in which the borrowed capital will be invested is likely to be a success or a failure and, therefore, whether he is likely to have not merely

his capital returned, but whether the interest will be paid on the due date. If there were no risk involved in lending capital, every one could get a loan from a bank so long as funds were available. A bank, however, cannot prudently give a loan unless it knows fully the financial condition of the borrower. The village money-lender comes into close contact with the agriculturist and is thus in a better position than a bank to lend to him; the rate of interest is increased according to the risk taken, and the extra charge is in the nature of an insurance premium paid against the risk of loss.

3. *Remuneration for Inconvenience and Labour.* The best loan is that which can be recovered whenever it is wanted and any bank will be prepared to advance money in its possession, if it knows that it can get it back at a moment's notice. But every debtor is not in a position to pay back loans recalled without notice; the money-lender frequently has to run after the borrower, and he often experiences considerable difficulty in recovering his principal and interest; the lender has sometimes to incur a good deal of trouble over the investment. He has to keep accounts, to send a man or go himself to get the instalments of interest and, included in the rate of interest charged, there is some remuneration for these troubles and worries. The greater the inconvenience anticipated, the higher will be the rate charged because of the time and labour involved.

The problem of interest may be considered under three heads: (1) Should interest be paid? (2) Why is it paid? (3) How is the rate determined?

1. Should interest be paid?

Objections to the charging of interest have been based mostly on (a) moral or religious, and (b) socialistic grounds which very often are at bottom also moral or ethical objections rather than economic.

(a) *Religious and Moral Objections.* The taking of interest was (and is) condemned by some religions. The Christian Church forbade usury and the lending of money at interest, while the Muslim religion also condemns the practice. This attitude was due mostly to the fact that formerly there was little employment of capital for productive use; people did not realize the productiveness of capital and most of the loans were borrowed for consumption purposes only, by persons in distress who were compelled to borrow, or by spendthrifts. It was held that the latter ought not to be encouraged in their unthrifty habits and no advantage should be taken of the former who were in difficulty to whom help should be given and interest charged. Hence those who took interest were regarded as clever and unscrupulous money-lenders. The malpractices of these "Shylocks" led to the general condemnation of interest and the whole money-lending system was regarded as oppressive and objectionable.

(b) *Socialistic Objections.* Socialists condemn interest for somewhat different reasons and yet their objection is fundamentally a moral one as it is based on the idea that it is wrong for any one who has a large capital to be able to remain idle without doing any useful work. As such he lives, more or less comfortably, on the interest earnings of his capital, without any exertion on his part, and this, it is contended no one has a right to do; he lives upon the labour of others, and it is possible for any one, who has inherited a sufficiently large sum of money, to live all his life without ever exerting himself in any way to help in the production of utilities; he takes away from the product and contributes nothing in return and as such he is a parasite on society. Socialists do not deny the usefulness of capital, nor the desirability of saving by, or in, a community; it is, with them, a question *how* the saving shall be effected, and *who* is to reap its advantages.

Interest is a Payment for Waiting.

The condemnation of interest is, perhaps, based on a misunderstanding of its real nature. If the plough bullocks of a farmer die and he has no money with which to purchase others, he will have to borrow either some bullocks for which he will have to pay, or borrow money to purchase bullocks and pay interest on the amount loaned. Suppose another farmer has saved some money and the one who has lost the bullocks, knowing that his neighbour has capital available, asks for a loan. The question arises has the man with the money, who has been more prudent (or more fortunate) than his fellow-cultivator, the right to refuse the loan or not? If he has no right to refuse, interest cannot be justified but if he has such a right then interest may be charged. Is he not as much justified in charging interest on the loan as he would be if he had spent the money on purchasing bullocks and then charging for their use?

Capital is nothing but the product of past labour that has not been used or lost. It is wealth not spent and as a man can enjoy and dispose of the result of his present labour as he chooses so long as he does not interfere with the rights of others, there is no reason why he should not be able to do the same with the fruits of past labour. A prudent farmer who has saved some money has stored up energy, which he can utilize as he likes, subject to the qualification mentioned above. A careless farmer has no legal right to say to him, "Give me the money to-day as you can afford to wait for six months until I return the money." Whether he has any moral right will depend on all the circumstances and conditions of the two men; legal and moral rights do not necessarily go together. If every needy person could, as a matter of right, demand the savings of others, few people would be inclined to save. People save capital mostly because they will have the opportunity of using it as they please afterwards, and the inducement for individuals to save capital depends essentially on the recognition of its private ownership,

and on the possibility of obtaining an income from its use, or disposing of it as they desire. The only consideration for the economist is whether the necessary effort and sacrifice will be made without the payment of interest and, if not, whether production will be decreased because of a lack of capital.

2. Why is Interest paid ?

"People pay interest because they receive a necessary service in return and because this service would not be forthcoming without a reward." Though loans are taken in the form of money, this money represents capital. It enables the borrower to purchase bullocks, or to get a plough and seed, or anything else to help him in production and thus to get a greater product than he would have obtained without its use. If the borrower can obtain an additional product by the use of capital, why should a share of this additional product not go to the lender whose capital has helped the borrower to augment his wealth ? The lender knows this and so claims a share : he might be able to utilize the capital himself, but he is prepared to lend it, if he thinks that he will get a greater return in the interest which is paid to him for the service he rendered by allowing his capital to be used in production. Interest is paid, not because it is right or wrong, but *because it is expedient* ; the question of morality hardly arises, if at all, in the general case ; it might arise in the relations between particular individuals according to their circumstances, *e.g.* how one came to be in need and the other affluent. All that the student of economics is concerned with is, how can a maximum production be secured, and therefore whether the payment of interest is likely to increase output or otherwise.

3. How is the Rate of Interest Determined ?

The price of the service of capital is expressed in terms of a percentage per annum on the amount lent and is called the rate of interest. Like other values it is determined by the relation between demand and supply ; in this case, of capital.

DEMAND FOR CAPITAL consists of the demand for the services of capital, and this depends on the utility of capital to the borrower. The law of diminishing utility applies; the greater the supply of capital available the less will the borrower be prepared to pay for its use; the higher the rate, the less he will be inclined to borrow, and the lower the rate, the more he will tend to ask for loans.

THE SUPPLY OF CAPITAL depends upon the :—

(a) *Power to Save.* No one can save unless he has a surplus. A small farmer in the Punjab who owns only a few acres of land, may be getting a net produce valued at, say 90 rupees a year. If this farmer has no other source of income and a family of four members to support, he can save little if anything at all. Even if he is alone and has no one to support he will be able to save very little, and only then if he does not spend much. The power to save depends on the excess of production over consumption, and in order to save a large supply of capital, a community must produce more than it uses; both these things must go together. Indians generally perhaps, are prepared to spend less rather than produce more; this reduces their standard of living and also their power to produce goods. In order to have the capacity to save much, a nation must have the ability to utilize its resources to the utmost, and its people should be energetic, enterprising, thrifty and prosperous. The Indian agriculturist has very little surplus, and his power to save is, therefore, very meagre indeed.

(b) *Will to save.* The savage has usually little or no thought for the morrow and hence no desire to save; more civilized peoples often look ahead and save in order to improve their conditions. The Indian peasant is often extravagant and improvident; he has little desire to make progress or to provide for the future by saving, even if he could, which is not often the case.

The motives which induce men to save are :—

(i) Desire to provide for oneself and family. Foresighted people wish to (a) make provision for the proper upbringing of their children ; (b) preserve their resources for old age ; (c) perhaps, live a life of ease and independence.

(ii) Ambition to command social esteem, power and influence, or to be successful in a business or profession.

In addition to these subjective conditions for saving, the following objective conditions also affect the will to save.

(i) Peace and security in a country. Only then will people save ; if there is anarchy and misrule, or danger from thieves and robbers, people will not be inclined to save. One of the greatest benefits that the British rule has conferred on India is continued peace and security ; this has set up the basic conditions without which the growth of capital in recent years would have been impossible.

(ii) Where peace and good government create an atmosphere for saving, facilities for investment provide encouragement to save. If there are good savings banks, insurance companies, a well-developed banking system, a stable currency and profitable channels for productive enterprise, the people will tend to save more.

(iii) The rate of interest. If this is high, people will save more than if it is low. Just as the supply of goods depends upon the demand for them (expressed by a willingness to pay a price), so the supply of capital also depends in some measure on the price offered for it, but not entirely ; some people will save even though no interest is offered ; others will not save no matter how high the rate of interest may be. In India, a high rate of interest is mostly a sign of insecurity and lack of facilities for investment ; it can hardly attract an increased supply of savings.

Good Conditions for the Growth of Capital.

Almost ideal conditions for the growth of capital exist in England and in the United States of America.* "Their natural resources, their numerous seaports, excellent climate and geographical situation, their good and stable government, their highly developed banking, monetary and credit systems and their organized capital markets, which serve to bring the accumulators of capital into close touch with those who make use of it, have resulted in eminent efficiency in industry and commerce. The power to save therefore exists in a marked degree. The will to save is equally pronounced. In both countries great importance is attached to social prestige and power, the possession of wealth, and all that it brings, is a most powerful factor in inducing men to work hard and to save for the future. The tenacity of the habit of work is also noticeable in both peoples. The standard of morality is high, there is a love of order and of peace, a desire to work in harmony and tranquillity, a strict enforcement of the law and of the rights of property. Everywhere one finds that moderation and consistency in the consumption of wealth, which are essential in a people ambitious to provide for the future, rather than to enjoy to the full the benefits of the present. All these have resulted in a remarkable accumulation of wealth in both countries and with the accumulation of wealth goes hand in hand the advancement of all civilized arts and institutions.†

Growth of Capital in India. In India the growth of wealth is greatly hindered by the low productivity of the people ; although the natural resources of the country are vast, they are not fully developed. Much of the existing development is the result of foreign initiative, enterprise and capi-

*See Elements of Economics by S. E. Thomas.

†*Ibid.*

tal. The mass of the people are ignorant, illiterate and conservative ; and the industry on which they mostly depend is agriculture. Here also, the productivity per acre is very low and holdings are uneconomically small. There is not much scope for the application of large amounts of capital to agriculture and avenues for industrial and commercial development are limited.

The power to save is hardly existent ; there are people, no doubt, who can afford to save, but their number is limited. The subjective conditions for saving exist ; people have foresight and family affection but, as has been said, the poorer and uneducated classes are mostly improvident and extravagant, even with what little income they receive. The people are peace loving and there is sufficient internal and external security for saving, but the facilities for investment are lacking. A large part of the savings has a tendency to go into hoards rather than into useful and productive channels. The standard of morality is fairly high, but social and religious customs entail huge expenditure (which is felt to be compulsory) and much waste.

Ideas on Usury. Both the Christian and Muhammedan religions are fundamentally equalitarian ; they both profess a belief in the brotherhood of man, or at least, that their co-religionists are their brothers. The idea, too, that money lent to itself can neither produce anything nor even multiply (‘Two coins cannot breed more coins’) was widely held. Further, as has been mentioned, there was formerly little opportunity for profitable investment in trade and industry and hence loans could be taken only for consumption purposes. It followed then, that any borrowing was likely to be done either by an extravagant person, some spend thrift or other, or by some one in need or distress. In such a case then, the only economic question to be considered was the security for the return of the money, and whether the lender was put to any trouble or inconvenience by the loan, particularly if the money were not refunded at the agreed time, was ignored.

There remained the religious or moral aspect of borrowing and lending, in which matter the Christian Church at any rate, considered itself to be vitally interested. If it was a spend thrift who wished to borrow, it was argued that he ought not to be encouraged in his wasteful habits, and no money should be lent to him at all. That left only the case of the lending of money

to one who was in dire need of assistance, and in such instances, to charge interest for lending something which would not produce anything if left to itself, was bound to be usurious; it was decidedly uncharitable and un-Christian to take advantage of the distress of a fellow-Christian; rather help ought to be given to him freely. Hence the teaching of the Church in medieval Europe on the taking of interest; it was held to be reprehensible; such lending as was possible was bound to be immoral, and the taking of any interest from a borrower in need was onerous and unjust.

(Incidentally it is probably one of the reasons why the business of money-lending; i.e., early banking, was left to the much despised Jewish race, i.e., to the people outside the pale of the Church; such a business was held to be beneath contempt for those professing Christianity.)

With the development of opportunities for the profitable investment of money, ways and means of getting over the teaching of the Church were rapidly devised; arguments were soon forthcoming to show that the ideas of the early Church on this question of interest were all wrong; that Christ had never either forbidden, or intended to forbid, the taking of interest; that it was usury only, i.e., the charging of a high rate of interest that was to be condemned. Hence we find that there was a maximum legal rate of interest in England until the middle of the nineteenth century. And so we have one more instance of the teaching of the religious organization following, rather than leading, the practice of men, as has so often been the case in economic affairs; many of the common religious doctrines seem to have arisen from economic needs or practices; e.g., the question is often asked, "Was the caste system of the Hindus economic in origin?" But these and similar speculations must be left to the reader to follow up at his own leisure.

RENT

The Ordinary Meaning of Rent.

The word 'Rent' in ordinary everyday language means a tenant's periodical payment to the owner or landlord for the use of land, house, rooms, or the payment made for the hire of such things as machinery. This is not the meaning of Rent in Economics as it is not precise enough; it is too vague. The rent of a house includes not only a payment for the capital invested in the buildings, but also a charge for the expenses of management as well as something to cover the owner's risk; in fact it is really what economists call interest and not economic rent. Neither is the rent of a tonga which is a payment for the services of capital and labour. The rent payment by a tenant to a landlord in an Indian village; for the use of agricultural land is often not economic rent either, as it may include the cultivator's share of the land and other charges.

Economic Rent.

What then is *rent* in the economic sense, or what is **Economic Rent**? 'Rent' is associated in Economics exclusively with what we have defined as land *i.e.*, all free gifts of nature which are used as agents of production. It is the income arising from the productive employment of such things as land, or mines, or water-power. It is not necessary that it should be paid by a tenant to a landlord, or by one person to another, the owner of land may get it by working on his land himself, as it is simply the surplus over and above the cost of the factors applied. Suppose for example there are two equal pieces of land, one owned by A and the other by B, A's land just pays the cost of his labour and capital but no more. B's land is more fertile and its produce is greater, not because of B's efforts but entirely because of natural conditions. Such differential advantages of B's land over A's produce a surplus which is called *Economic Rent*.

A similar surplus arises from any differential, natural advantage whether of ability, place or position, *i.e.*, things which may not be due to any effort on the part of their owner, but from which distinct economic gains accrue. These gains are, to all intents and purposes "Rent," and they always tend to flow into the pockets of the owners of the particular differential advantages. Some people define Economic Rent so as to include all such earnings; others call them "Quasi Rent" and leave the term 'Rent' itself to the one case of a differential advantage arising from the superior natural advantages in fertility or position, of one piece of land over another.

How Rent Arises.

It was stated earlier that the term "Land" denotes all the natural agents employed by man in production. David Ricardo, a famous English economist, who lived at the beginning of the nineteenth century, first explained the phenomenon of rent. His exposition was so clear that, while later economists have added to, and developed it,

they have not really altered it very much. In seeking to analyse the nature of rent, Ricardo confined his attention to agricultural land, and this method makes it easier to explain the theory of rent as applied to all natural agents. Even if we confine our attention to agricultural land, it must not be forgotten that the same principles apply to land required for all purposes and also to other natural agents of production.

Peculiarities of Land as a Factor of Production.

One of the first things to be noticed about land is that it differs from the other factors of production in the following ways :—

I. *Its supply is limited.* It is a gift of nature ; its quantity or supply is fixed for ever. Man cannot add one inch to the existing supply ; the total quantity of land is permanently fixed by nature. When the demand for capital increases, there is tendency towards greater saving, but when the demand for land increases it may be possible to increase the area of land which is applied in production, or by intensive cultivation to get more produce of the existing land, but nothing can be added to the existing surface of the earth, except such relatively infinitesimal quantities as may be reclaimed from the sea or from lakes

II. *Differences in Quality of Land.* When capital is borrowed, any one rupee is just like any other rupee, but in the case of hired land, one piece may be very different from another in fertility. An acre of land in the black cotton soil area of the Deccan is far more fertile, and therefore more valuable, than an acre of land in the desert region of Rajputana. Again, land in the same region but near a railway station, will generally be more valuable than land of the same fertility in an out-of-the-way village. This influence of location on the value of land is very pronounced in towns ; plots of land in well-developed business areas are usually far more valuable than those in the

suburbs. It is because of these differences in quality and place that the rent of different plots of land varies and consequently there cannot be one general rate of rent as there is of interest.

Ricardian Theory of Rent.

Beccardo began by imagining how it was that rent came to be paid at all, and, after that, he proceeded to think out a means of measuring rents. In a new country, (or for that matter in the olden days in all countries) as long as there was a good supply of equally good and equally convenient land to be had for the taking, no one was willing to pay anything for the use of land. Rent did not come into existence at all at this stage. The price of the produce of land will, in the long run, tend to cover the marginal cost of production, and thus marginal cost will include only wages, interest and profits, but no rent, where there is enough of the best quality land available free to all who desire it.

If, however, population increases and there is a greater demand for the produce of land, so that all the best quality land (we will call it A grade) is occupied then new settlers will have to bring into cultivation land (B grade) which is less fertile or less conveniently situated than A grade land. With the same quantity of labour and capital applied, and with the same methods of cultivation, B grade will yield a lower quantity of produce than the A grade land. If for a unit of labour and capital employed, an acre of A land yields 20 maunds of wheat, for the same unit of labour and capital applied to an acre, B may yield only 16 maunds. The latter is brought into cultivation only because, owing to the rise in the demand for wheat, in consequence of the growth of population, it pays to cultivate inferior land. The price of wheat in the market, whether raised from A, or from B, grade land, is the same and is such that it covers the cost of production on B. It makes no difference, however, to an occupier of land, whether he cultivates B and

gets 16 maunds per acre, or A from which he gets 20 maunds, if he has to pay a rent of 4 maunds per acre to the owner for the right to cultivate A grade land. As soon as B comes into cultivation the owners of A enjoy a surplus which goes to the owner of the land and is called rent.

Marginal Land.

The B grade land commands no rent because it is freely available. If, however, owing to a further increase in population, all the B grade land becomes occupied and it becomes necessary to use more land, inferior in quality to B, then this inferior and (C grade) is also cultivated but it yields only 13 maunds of wheat per acre per unit of labour and capital applied. Then A will yield 7 maunds, and B, 8 maunds per acre of a surplus over C. This surplus will tend to be paid to the owners of the superior lands, but C grade land will yield no rent. Similar results will follow if still worse grades of land are brought into cultivation. The lowest grade land, which is under cultivation at any given time in order to meet total demand for the produce of land, is said to be on the margin of cultivation. It is called the marginal land and no rent will be paid for it, since the price of the produce raised on this land is just sufficient to pay the cost of labour, capital and organization applied. It just pays to bring this land into cultivation, but nothing more.

Criticism of Ricardian Theory.

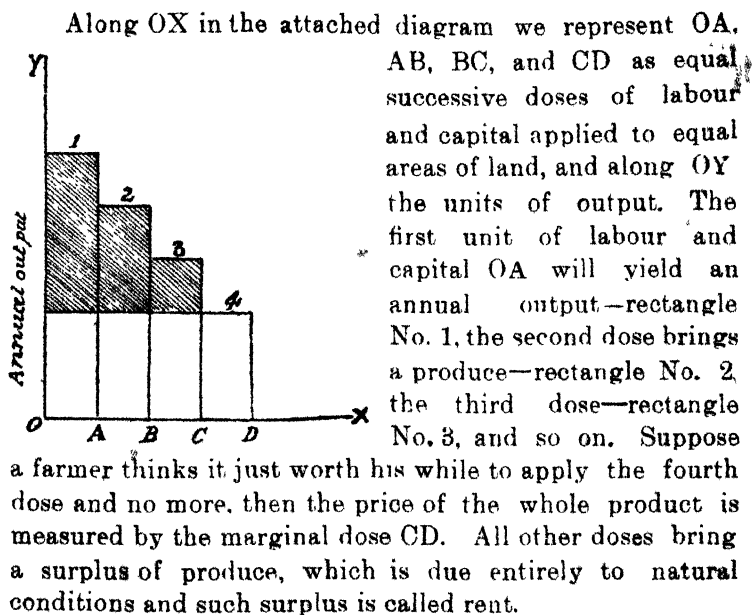
Thus Ricardo concluded that "Rent was a payment for the natural and indestructible properties of the soil." His theory concerning the nature and origin of rent has been criticized by some economists, who have asserted that there is no historic basis for Ricardo's order of cultivation, and that it is not necessarily true that all the better land will come into cultivation first. The criticism seems to overlook the fact that Ricardo *assumed* a particular order of cultivation merely in order to explain the phenomenon of rent. The order is not the material part of his theory;

all he says is that rent arises because of the natural advantages of one piece of land over another. It has also been pointed out that there is no such thing as the natural and indestructible properties of the soil; that is fertility is exhaustible and rent does not depend on the fertility of the soil alone, but on any kind of natural advantage possessed by one piece of land over another. Hence, though Ricardo's theory may be amplified, the fundamental principle that rent is due to the differential natural advantages remains unaltered.

The Ricardian theory, however, is true only under certain given conditions. It is assumed that the market for land is free, that there is free competition, and that when the price of produce rises, inferior land is also available free for cultivation, and when the price falls, the land at the margin will be given up at once, because it no longer pays even the remuneration of labour, capital and organization applied to it; but these conditions may not exist everywhere. In India, for instance, the market for land for a long time was not free. The ruler of the territory considered himself to be the owner of all the land, and the rents paid by the tenant to the landlords included taxes. Further, we have also seen how custom governed rent in most of the villages. In some parts of the country, competition for land has become so keen that landowners can often extort more than the economic rent from the cultivators. The latter are so conservative and so wedded to a particular piece of land, that even when it is no longer remunerative to cultivate, they will not abandon it and take to some other piece of land; they will lower their standard of living and live on the same land for which they pay an uneconomic rent. The same thing happens if all the land in an old country is occupied and population expands still further; then even the marginal land will begin to pay rent. There will be apparently no land which could be called the "*no rent land*."

Margin of Intensive Cultivation. *

So far we have dealt with the *extensive* form of the theory of rent. We have said that when demand for the produce of land increases inferior land will be taken into cultivation, but that is not the only way of getting more produce. More labour and capital can be applied to the existing land and more produce obtained by cultivating it *intensively*. According, however, to the law of diminishing returns, the produce for each successive dose of labour and capital will in the long run, be progressively reduced.



Rent does not enter into Price.

We have seen that it is the rise in the price of the produce of land which causes the phenomenon of rent. It is the price of the produce that determines which land will remain in cultivation and which will be abandoned. If the price of the produce of land increases, rent rises; if the price is lowered then rents fall. The price determines the

margin of cultivation. Marginal land is no-rent land and hence rent does not enter into price.

It is sometimes supposed that the reverse is true, i.e., that rent determines the price of the produce of land and high prices must be charged on account of the high rents. Suppose a briefless lawyer takes a big house in an out-of-the-way place in a town, for which, he pays a high rent. Can he charge high fees merely because he is paying a high rent for his premises? Houses near the Law Courts in most towns command relatively high rents because the houses are conveniently situated for a lawyer's practice, and in that locality the men who occupy these houses are able to charge high fees and are thus prepared to pay high rents. They cannot charge high fees simply because they are paying high rents. It is prices which determine rent.

Take another instance of a shopkeeper who occupies premises in a busy quarter of a town for which he is paying a high rent to the landlord. Suppose the owner of the shop is his relative, who dies and leaves the freehold rights of the shop to the occupier. Now the shopkeeper has to pay no rent. Will he charge lower prices for his goods? Will they be affected at all? It is hardly likely. The same is true generally and thus we conclude that rent has no effect on price, it does not decide price. Price decides rent.

Economic Progress.

The phrase "Economic Progress" in its simplest meaning, implies growth of wealth; but, if the quantity of wealth in a country gets doubled during ten years, while its population gets trebled during the same period, should we say that the country was progressing economically? Wealth, but not welfare has increased. Again supposing that the population of the country has not increased at all with the doubling of wealth, but that the large majority of the people have become poorer: while all the additional

wealth is concentrated in the hands of a few rich people. Here, again, though wealth has increased in the aggregate, welfare has not increased. Economic progress means, therefore, a growth of wealth which is accompanied by a general improvement in the standard of health, strength and efficiency of a growing population. With the growth of civilization, population has generally increased, but if this growing population is not better fed, better clothed, and better housed, and has not at its disposal in a larger and fuller measure the means of enjoyment of life, it cannot be making economic progress.

Effect of Economic Progress on Rents.

In order to see the effects of this we must examine some of the various influences which together make economic progress.

(i) *Improved Methods of Cultivation.* The effect of improvement in the methods of production is to give an increased produce at a lower cost per units of effort. This means in the case of cultivation (other things remaining the same) that the same amount of produce can be raised from less land, or an increased quantity of produce from the same land. Inferior land can be abandoned, the margin of cultivation will rise, and rents will tend to fall.

(ii) *Improvements in the Means of Transport.* The effect of improved means of transport is to make the produce of distant lands accessible to the world, and to raise the demand for produce. Rents will tend to rise, but, owing to competition with foreign produce, those cultivators who are engaged in the production of crops which are not profitable will have to give up their lands. Then the margin of cultivation will rise, and rents will tend to fall. This can be seen where a railway line is opened in a district; those places which are near the railway become more important even though smaller than those places which are inaccessi-

ble to the new line and which tend to fall in relative importance.

(iii) *Increase in Population.* This leads to a rise in rents, not merely because of the increasing demand for the produce of land, but also because of the increasing pressure of population on land and the encouragement of its use for other purposes than agriculture.

(iv) *Advance of Civilization.* The growth of wealth and an improved standard of life lead to more varied and increased consumption of wealth. New, improved and better qualities of goods are desired; the demand for the produce of land increases and the result is a rise in rent.

Land Revenue in India.

OWNERSHIP OF LAND. As land is a free gift of nature the question arises who is to be regarded as its owner? There are three different theories put forward in answer to this question.

(i) *Economic Doctrine of Public Ownership.* According to this the State should be the owner of all land. All the income of land is not the result of human efforts but is entirely due to natural causes. No individual should have any right of property in land, but the government should give land to the cultivators and charge from them the entire economic rent.

(ii) *"English" Doctrine of Absolute Ownership.* Under this, those who have acquired land, whether by clearing purchase, or inheritance, are to be regarded as absolute owners.

(iii) *"Indian" Doctrine.* According to this, three interests are to be regarded as having limited rights of ownership in land; (a) the Government is the lord paramount; (b) the landowner or landlord is recognized as the owner, and (c) the tenant is in actual possession with sometimes rights to remain in possession.

Rent and Revenue. The share of the landlord in the produce is called rent, while the share of government is called land revenue. The tenant is bound to pay rent to his landlord; if he fails to do so he is liable to lose his possession. The landlord is liable to pay revenue to the government; otherwise he is liable to forfeit his right of ownership.

Land Revenue in the Hindu Period.

Rule in the Hindu period was by families, and each family was represented by its manager or head. The heads formed the village council, under the presidency of the village headman. The headmen of ten villages formed another council, the presidents of which were called *choudharies*. Ten *choudharies*, representing one hundred villages, formed the *parganas* and ten *parganas* formed the supreme council, whose head was the *Raja*. The revenue was paid in agricultural produce and varied from one-sixth to one-tenth of the gross out-turn. The headmen settled the total quantity with the *Raja* and then apportioned it among the families.

Mohammedon Period.

When the Muslims conquered the territory, the king kept a portion of the acquired land for himself as *Khalsa* land in order to meet the expenses of the royal household. The rest (called *Jaqir* land) was divided into military circles and was granted to *Taluqdars*, in return for their undertaking to pay *khiraj*, or tribute, and to contribute soldiers in time of need. These *subas* and *taluqdars* similarly divided the land allotted to them and gave it out to landlords under them. This system which produced a series of superior and inferior landlords was modified by Akbar, whose successors further modified his system and what was known as the farming system was introduced. Villages were leased out to contractors called "farmers" on payment of a fixed quantity of grain or money

and these farmers made their own arrangements with the cultivators.

British Period.

In 1765, when the Diwani, or power to collect revenue from Bengal, Behar, and Orissa was granted to the East India Company, the farming system was in vogue. Under the influence of the "English" doctrine, and with a view to putting the system of land revenue on a sound basis, the company recognized the rights of landlords as owners.

Permanent Settlements. A Permanent Settlement of Land Revenue was made in 1793, under which the amount to be paid by the landlord was fixed permanently. The net produce of the land was determined, then the value of nine-tenths of his produce was reckoned in terms of money and this was fixed as the revenue. At first the zamindars were in great difficulty as the share of produce left for them was too small; but with the growth of the country, the share of the state dwindled and the landlords pocketed most of the rent. They were free to extort any amount they liked from the poor cultivators who had to pay even more than the economic rent; i. e., they were "rackrented."

Temporary Settlements. The Government, therefore, decided not to settle any more districts permanently and after the annexation of the U. P. in 1803, the plan of periodical settlement was adopted to adjust the Government share according to the growing fertility and improvements in the land. Generally twenty years is now considered a sufficient time between the revision of the settlements. By the time the Punjab was annexed to British territory, the temporary settlement of the U. P. had been well developed

Assessment. The gross income from an estate is called gross assets, and the balance left after deducting the

expenses of cultivation is called its "net assets." The Government revenue was first fixed at two-thirds of the net assets and later it was reduced to half that amount. By the Punjab Land Revenue Amendment Act of 1929, the share of the State has been fixed at one-fourth and the period of settlement has been increased to forty years.

Criticism of the Land Revenue Policy of Government.

Assessments in India are based on the Indian doctrine which regards the Government as the paramount owner of all land in the country. It is considered to be entitled to the entire surplus produce, which is not the result of the efforts of the cultivator, but it takes only a part of the produce as its share. Government officials have regarded land revenue as being in the nature of rent rather than as a tax, but most Indian economists take a different view. They assert that the Government does recognize private ownership of land and that every owner has a right to transfer his land which he can either sell, give or bequeath, at his own pleasure. The owners have tenants under them for whom they charge rent and the government revenue should be regarded as a tax on agricultural incomes rather than as rent. It is also suggested that, as the holdings of land in India are small and agricultural income low, the heavy demand arising from government works a hardship on the small holders. Remissions are, however, granted to peasants in the time of agricultural depression.

Tenancy Legislation.

Cultivators in India are generally so conservative and unenterprising that landlords can charge more than the economic rent by threatening to eject the tenants. An unrestricted rise in rents reduces, in the long run, the income of the whole country. Where the cultivator has no interest in the land he will make no improvements and in

order to remedy this state of affairs the government has passed laws to protect the interests of the tenants. Such tenancy laws are intended to provide a certain amount of fixity of tenure and to protect the interests of the tenants, generally by controlling the enhancement of rents.

Peasant Proprietorship in the Punjab.

In the Punjab more than half the land is held by peasant proprietors, who cultivate the land themselves and pay revenue to the government. In some respects they are a fairly prosperous class of agriculturists, particularly in the Canal Colonies. The size of the average holding in the province is about between six and seven acres, but in some districts, e.g., Jullunder, Hoshiarpur and Kangra, it is from two to five acres only and barely provides a living for an average family. There is increasing sub-division of land and, but for the development of new lands, the pressure of population on the land would have been extremely heavy. The peasants of the Punjab are more heavily indebted than cultivators in other parts of the country, and the chief economic problem in the province to-day is the amelioration of the condition of the peasantry.

PROFITS

Nature of Profits.

Profits are the share of the produce which belongs to the entrepreneur or organizer. Ordinarily a business man calculates his profits as that which is left to him after deducting the total expenses of the undertaking from the receipts. The earlier economists were accustomed to think of concerns which were managed entirely by the people who put their own capital into business and, therefore, they did not distinguish between the functions of the entrepreneur and the capitalist. They did, however, recognize that what was left to the entrepreneur was

certainly more than mere interest on the capital employed, and this surplus they regarded as the "wages of superintendence and management."

Walker's Theory. It was the American economist Walker, who first brought out clearly the distinction between the functions of the entrepreneur and those of the capitalist in modern industry. He showed that it was not necessary that a man should possess his own capital in order to enter on any business or industrial enterprise; a capable man could launch a successful undertaking with borrowed money. Walker further pointed out that the part played by the entrepreneur was not like the work done by a wage-earner or labourer in industry; his contribution was different from that of mere labour, as he had to assume the responsibility of the entire business and to take the risks inevitably involved in any undertaking. The organizer conceived its idea, controlled its working, supplied the necessary technical skill and administrative ability. This kind of work could not be done by every one as it frequently required special character, foresight, courage and ability. Labour can be done under another person's control; its efficiency can be acquired and a standard of uniformity of labour attained fairly easily. But success in business, while sometimes due to what Professor Henry Clay has described as "luck and a lack of scruple," is also, in many instances, the result of the particular abilities or the exceptional opportunities of the business man. Just as there are natural differences in the quality of land, so there are variations in organizing ability. There are exceptionally able and fortunate business men of the type of Carnegie, Tata or Henry Ford, as well as small shopkeepers who hardly make a living; at the bottom are those people who are just able to meet their expenses and get no reward for

their ability. These are the "no-profits" organizers. Profits are to be measured from these "no-profits" employers upwards, just as rent is measured from "no rent" land upwards; they are, in fact, the additional wealth created as a result of the superior ability of the entrepreneurs; they are a true rent of ability, deriving from the differential advantages arising out of particular skill, or good fortune, in organizing work. Modern economists accept the essentials of Walker's theory but they have refined and improved on it.

Gross Profit. This is what is left to a business man after deducting total expenses from total receipts. It may be analysed into various elements as follows :—

I. *Rent of land, interest on the capital, and the wages of the labour* supplied by the entrepreneur. If the business man has put any of his own capital or land in the business, then the interest and rent cannot be included in net profits, because the entrepreneur could have hired them; so also any work which could be done by a salaried manager must be paid for separately and cannot be regarded as part of the net profits. The work done by the business man in running the concern is different from the administrative ability and assumption of control and responsibility. The wages of management should be deducted from gross profit to get at true net profits.

II. *Depreciation and Maintenance Charges.* For the maintenance and continuation of a business, its buildings, plant and machinery have to be regularly repaired and replaced and the charges for this work are to be deducted from gross profits.

III. *Chance Gain and Monopoly Gain.* A business may sometimes be making exceptional profits owing to certain advantages which it enjoys, not as the result of the personal ability of the entrepreneur, but as the result of exceptionally

favourable circumstances. During the Great War, for instance, many firms had exceptional opportunities of enlarging their works and made extraordinary profits directly as the result of the conflict.* So also, a person who happens to have a monopoly of any commodity may earn exceptional profits which are not due to his ability but to external circumstances. A good example of this is to be noticed in those countries where motor traffic has developed on a road or over a bridge on which a toll can be levied. The receipts from such tolls have increased enormously in recent years and have provided greatly increased profits to their owners without the exercise of any extra skill, foresight or ability on their part. Such gains are not a part of net profits.

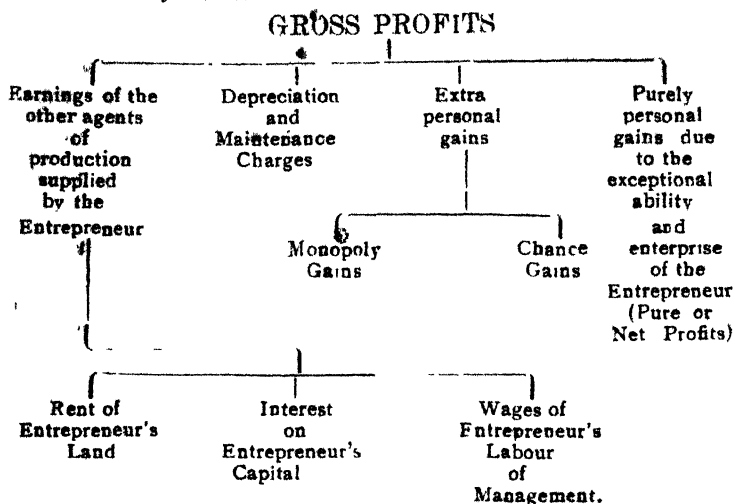
IV. *Pure or Net Profits.* Whatever is left as the reward of the special ability and risk of the entrepreneur after deducting the above, is regarded as net, or pure, profit. It is due entirely to the performance of the functions of the entrepreneur. In modern joint stock enterprise it has become possible to divide this item into two parts :

(a) Payment for risk which goes to the shareholders in addition to the interest on their capital.

(b) Reward of superior ability, which goes to the management of the company.

Some economists do not include payment for risk as a part of pure profits ; but it is to be noticed that courage to take risks in launching an enterprise, anticipating demand, forecasting the future and assuming responsibility, are inseparable from the undertaking, and these things are a part of business ability. Generally, the greater the courage, the more the reward, if successful. "Pure, or net profit, is, therefore, a purely personal differential gain which accrues to the organizer by reason of his enterprise and organizing ability."

The constituent elements of gross profits to an entrepreneur may be shown thus :



The Marginal Entrepreneur.

According to Walker's theory there can be no general rate of profits, just as there can be no general rate of rent, because profits, like rent, are to be reckoned from the 'no profits' employer upwards. The marginal employer, according to Walker, is in the same case as the owner of marginal, or 'no rent' land; he is a 'no profits' employer and as is the case with rent, profits also do not enter into the price of the produce. Most modern economists do not accept this part of Walker's theory, but assert that an entrepreneur will have no inducement to remain in business unless he is earning at least a certain minimum rate of profits, which is the normal rate in that industry. In order to have the required amount of any article produced, a community should not only pay the rent of land, interest on capital and wages of labour, but must also pay a certain minimum rate of profits to attract sufficient entrepreneurs into the industry. Land requires no inducement to be brought

into and remain in cultivation, but entrepreneurs do require the prospect of a certain minimum rate of profits before they will operate. Those who have exceptional ability will gain extra profits, but even at the very bottom, each industry must pay a certain minimum rate of profits to the organizers. Marshall has pointed out how good, bad and average business units struggle in an industry; some are rising, others are falling; some are highly efficient and very successful; others fail owing to their inefficiency. But the price of the produce is, in the long run, controlled by the average, or representative firm which may be defined as one which has had a fairly long life and a fair degree of success, and which has access to the normal economies of production; such a firm earns a normal rate of profits. As normal price is determined not by the most inefficient firm, but by the representative firm, the cost of production of the normal firm determines price, i.e., the cost of production of the normal firm includes a normal rate of profits; the marginal entrepreneur is the representative firm and not the "no profits" entrepreneur. Hence, though profits are determined upwards according to the exceptional ability of the entrepreneur, they are reckoned from the normal rate of profits earned by the representative firm and not from the "no profits" firm. In every industry there is a normal rate of profits which determines prices; these enter into normal price and, above this normal rate, profits are just like the rent of land.

WAGES

What are Wages ?

The term "Wages" in Economics means the remuneration of labour of any kind. In ordinary use, the word wages has a narrower meaning as it is confined only to payments made to labourers hired by an employer and very often not even to those people who are called the "salaried" staff. A worker in a factor is said to be getting a wage;

a schoolmaster is paid a *salary*, a doctor charges his *fee* while a more or less voluntary worker sometimes receives an *honorarium*. All of these, however, are the price paid for the use of labour; even a part of the income of the entrepreneur consists of the wages of management. When the word "wages" is used, however, it is usually understood to mean the remuneration for personal effort, skilled, or unskilled, mental or manual, employed, or working independently: *i. e.* the payments made are received in the form of wages or salaries, fees or honoraria, or as part of the profits of an undertaking whether they be paid daily, weekly, monthly, quarterly or annually.

The Wages System.

In practice it is sometimes difficult to distinguish the share of labour in the product of industry. When a peasant proprietor in the Punjab cultivates his holding himself and produces a crop, what portion of this is the wages of labour? Under modern conditions the autonomous workman who manages his own industry, has tended to disappear and a distinct class of labourers or wage-earners, has arisen. To-day many employers engage and control hundreds or even thousands of workmen; a definite class of wage-earners has emerged with the development of the factory system. The problem of wages has become difficult, because the wage-earners consider that their interests are opposed to those of their employers and there is conflict between the classes; this seems to be true so far as the *division* of the product is concerned even though their interests are more nearly identical in desiring a good output for division among the different agents of production.

General and Relative Wages.

The problem of wages may be considered in two parts.

(i) General wages, or the principles according to which is determined the share of the national income which goes to labour as a whole;

(ii) Relative wages, where an attempt is made to understand why wages are higher in one profession than in another.

GENERAL WAGES

Customary Wages in Indian Villages.

We have seen how the share of labour in the produce of agriculture was, and still is, determined in many an Indian village. Out of the crop on the threshing floor, every class of workers receives a share fixed by custom. A carpenter will get so many *bharis* per harvest, which rate of wages for carpenters is fixed by custom and has remained unchanged for generations. The rate was perhaps originally fixed on the basis of the amount of grain that would be necessary for the maintenance of the worker and his family, sufficient to keep him contented with his lot. But then there was no "labour market" in Indian villages.

Beginnings of the Labour Market.

A labour market is developing in India. If a carpenter is wanted in the town there is no old carpenter who will do any little job for customary payment, as is common in the villages but one has to be hired for a cash remuneration to be fixed by bargaining. On the one hand, the work demanded of a carpenter in a town may be so large and so skilled, that several men may be required; an ordinary village carpenter might not be able to do the work and thus some inducement will have to be offered to the workers to give up their old life in the villages and come to the towns. On the other hand, in expectation of better prospects in towns, so many workers may migrate there that there will be competition among them for the available work, and thus we see the beginnings of a labour market with the growth of the towns.

This is still in its infancy in India as the labourers are mostly agricultural; they prefer the country to town

life so much that they do not compete with industrial labourers ; they are mostly unskilled, conservative, and ignorant ; they neither know where they can find work nor are they readily prepared to move to places where there are better prospects. The growth of the means of communication, and the increase of knowledge and intelligence among workers, will produce a better developed market for labour in India such as exists in the industrially advanced countries.

Peculiarities of Labour.

There is a labour market just as there is a market for wheat, or cotton, or any other commodity. The price of labour, like the price of commodities, is determined by the interaction of the forces of supply and demand. But labour is not merely a commodity; the essential difference between it and, say, wheat is that labour is inseparable from the labourer. A sack of wheat can be taken anywhere ; it can be disposed of at any price agreed upon by the buyers and sellers ; it can be stored to sell next year if the price is not satisfactory to-day ; but these conditions do not obtain with labour. A man has a will and choice ; he has his likes and dislikes ; he may not desire to move from one place to another ; he cannot be sent easily from one country to another. Again, he cannot store his labour ; if he does not work any day, that day will not come back to him again. Labour is a very perishable commodity and cannot be stored ; the labourer must either work or starve. Further, not only the welfare and happiness of the labourer depends on the wages he receives, but also his efficiency in his work. It is immaterial to the commodity at what price it is sold, but the standard of living of its workers is an important item in the welfare of a community and in its economic efficiency. Bearing these peculiarities of labour in mind we may now study the forces which determine the rate of general wages in a market.

Demand for Labour.

There is little difference between the demand for labour and that for any other commodity. An employer buying labour is in the same position as a purchaser of goods; he will not pay more for a thing than he considers it is worth to him but he will pay less for it if he can. The productivity of a worker, then, sets the *maximum* limit on the worker's wages. No employer will engage a workman unless he considers that the product of labour of the worker will be at least equal to the price he pays for it. Just as there is a limit to the quantity of a commodity which will be purchased or consumed, so there is a limit to the number of workmen who can be profitably employed.

Suppose a firm of printers who employed ten compositors at a good profit finds that it is profitable to employ two more. Soon a point is reached, however, where the employer thinks that the employment of an additional worker will not bring him a greater product than the extra wages he has to pay to this worker, who is called the marginal labourer. When there are a large number of compositors of the same efficiency available, the employer will pay to each of the workers only the wage which he has to pay to the marginal worker, and this wage is equal to the estimated marginal productivity of labour.

Supply of Labour.

The supply of labour (or services sold in the labour market) depends upon the number of those who must work for hire in order to earn a living. Its growth is determined (as we have seen in an earlier chapter) by the additional population, multiplied by the increase in its efficiency. The greater the supply of labour relative to the demand, the lower will be the rate of wages paid; just as the greater the supply of a commodity the lower will be its price. A commodity such as air has no price generally because its supply is unlimited. The supply of most commodities is limited by

their marginal cost of production, and the supply of labour has a tendency to grow as man has a tendency to multiply. but the population of a country is limited by the food supply. On the side of supply, therefore, the quantity of labour will depend on whether the wage paid to the labourer is sufficient to enable him to get those necessities and comforts of life which he has begun to consider indispensable to him. No labourer will be prepared to accept a wage below that which will enable him to get the amount of necessities, comforts and luxuries of life which he is accustomed to enjoy, and upon which he will, insist, under conditions of free competition. The lower limit to the rate of wages is thus set by the minimum below which general wages cannot fall *i. e.*, the standard of life of the worker. If in any place a wage below that limit is offered, the worker will prefer not to marry, or to go elsewhere, and that will tend in the long run to check the growth of labour in that particular place.

Rate of Wages.

Thus the rate of general wages depends on the relation between the supply of labour and demand for it. The upper limit is fixed by the marginal productivity of labour and the lower limit by the standard of life of the worker. Between these limits wages will fluctuate according to the relative bargaining strength of the employer and the worker.

Rates of General Wages in India.

If the people of a country have no definite standard of life the level of the wages will have a tendency to fall to the minimum of subsistence. In India the mass of labourers are unskilled and are mostly drawn from the rank of the agriculturists. They have no fixed standard of life and there is little or no check to the growth of their numbers, hence the supply tends to increase. On the other hand, the demand for labour is limited because of the dependence of the people on agriculture and the low productivity of the labourer. General wages have, there-

fore, a tendency to fall to the minimum of subsistence in India rather than to be governed by the standard of life of the labourer.

RELATIVE WAGES

We turn now to the consideration of wages of different groups of labourers. Though there is a tendency towards a general rate of wages, in some occupations rates are higher than in others. Why do engineers in India usually earn more than carpenters? Why are judges paid higher salaries than schoolmasters? Why do blacksmiths receive more than sweepers? In every country the labouring population is divided into a number of specialized occupations. In any occupation, all workers of the same grade may be getting the same rate of wages, but there is a difference between the earnings of different classes of workers; even within the same class workers of the upper grades get higher wages than those in the lower grades. These differences are due to the fact that the market for workers of any particular class differs in some respects from the market for general labour. There are very few engine-drivers compared with the number of agricultural labourers in India, and few lawyers and doctors compared with the crowds of clerks and shopkeepers. The demand for different classes of labourers also depends partly on the state of development which production has reached. Thus, in India, there is a large demand for agricultural labour for the two reasons: (a) that the country is naturally fitted for agriculture and (b) industries are not well developed.

The supply of workers in a particular occupation depends on the following factors:

(b) *Social Organization.* In India the influence of caste and custom has been, and still is, very strong in determining the supply of workers and the wages to be paid in particular trades. A person's occupation

was formerly determined by birth within a caste, rather than by his choice, according to his capacity and inclination, and the needs of the country as expressed in the demand for different services. A weaver's son became a weaver, a cobbler's son a cobbler; the number of workers in a trade under this system was thus artificially fixed. Movement from one occupation to another was well-nigh impossible, and the community could not adjust its labour supply to its varying needs and requirements. Happily the restrictions of caste and customs are breaking down and we see increased movement from one occupation to another in accordance with the commercial and industrial needs of the country.

(ii) *The ease or difficulty of learning the work*, according to the extent of efficiency and training required in the different occupations. It takes a long course of study and much expense to become a doctor, but one may become a coolie with little, if any training or expense. As only relatively few people devote the time, expense and energy necessary for training to be doctors, the supply of workers in this profession will be limited and they will command relatively high wages.

(iii) *The attractiveness of the occupation*. One profession will be more attractive than another if the work therein is agreeable and pleasant, can be easily learnt, is secure and permanent, affords greater chance of success and better prospects, carries more social prestige and power, or where there is greater independence, leisure and trust reposed in the worker. Thus, in India, many graduates flock into government service because of the security of employment, regularity of work, holiday periods, prospects of success, pension allowances and the prestige attached to such posts.

Real and Nominal Wages.

In connection with the problem of relative wages attention must be given to the distinction between real and nominal wages.

Nominal Wages. This is what a worker receives in money ; e, g., if a factory labourer is paid twelve annas a day, or a clerk in the office thirty rupees a month, that is the nominal wage, but this does not however, represent the true value of the remuneration received by a worker.

Real Wage. It is possible that a man who is earning thirty rupees a month to-day may be getting less really than a worker who received the same sum a generation ago, when it enabled him to purchase more *atta*, *ghi*, and milk than it will to-day. In such a case the value in goods was greater then than it is now and the value of the work was correspondingly higher. The following table shows the difference between real and nominal wages paid in the cotton mill industry in Bombay. Both were assumed to be 100 in 1914 as was also the cost of living, and the comparative figures for 1921 are :—

	Cost of Living	Nominal Wages	Real Wages
Men	167	190	114
Women	167	173	104
Big boys and children	167	192	115
All work people	166	187	112

Average monthly wages in different years were as follows :—

	1914	1922	1926*
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Men	18 6 8	35 10 7	30 1 9
Women	10 0 10	17 5 5	14 3 0
Big boys and children	9 6 7	* 17 14 0	
All work people	16 6 3	30 10 1	26 5 0

Further, even though two persons are getting the same nominal wages at any particular time, their real

*These figures still hold good if the average of the cuts effected, about 20 per cent., is applied.

wages may be different, because one has greater net advantages in his occupation than the other. A person may prefer to be a professor on a salary of Rs. 200 a month than a clerk on the same pay, if he considers it to be more congenial because of the vacations and the great opportunities for further study.

Some considerations which make one occupation more attractive than another have been considered and, in comparing the relative rates of wages in different occupations, we must not lose sight of the fact that, while nominal wages may be equal, real wages may be very different.

Time, Piece and Task Wages.

Wages are also distinguished as time, piece, and task wages according to whether they are paid for the time occupied by a labourer (hour, day, week or month) or according to the quality or quantity of the work done (*e.g.*, the charge for making a suit), or if the time during which a certain amount of work is to be done is also specified. The periods for which wages are paid in Indian mill industries differ. In Bombay mills, they are paid monthly, in Ahmedabad fortnightly and in Calcutta the jute mills give pay weekly. In casual employment, labourers are usually paid from day to day, or by the hour. Piece wages are generally paid by employers to women for work done in their home, and also to such workers as tailors, washermen, etc.

Low-paid Labour is not necessarily cheap.

Just as the worker distinguishes between real and nominal wages, so the employer distinguishes between the real and nominal cost of labour. An employer may pay fifty rupees a month each to two typists, but one of them may turn out a large number of pages and better work than the other, and it is better for the employer to pay higher nominal wages to a more efficient typist, rather than engage an inefficient worker on a nominally low wage.

DISTRIBUTION

Indian Labour.

Indian labour generally is low paid and inefficient ; often, it is not really cheap or economical ; a low rate of wages is paid to the workers because of their inefficiency and lack of skill. The wages are insufficient to enable the worker and his family to maintain a reasonable standard of living and thus their efficiency tends to diminish still further. The men work long hours but the output is very low ; they cannot put in brisk, sustained, disciplined, effort. but do hard work lazily for longer hours and the long hours in turn, tend towards a loss of efficiency.

The Memorandum submitted by the India Office in 1922 to the League of Nations gives the following figures about the number of Indian workers* :—

Agricultural workers, (excluding 776 crores of peasant proprietors),	278 lakhs
Marine workers, Laskars, etc.	1'41 lakhs
Industrial workers (including cottage industries, mines and transport).	2'02 lakhs

Hired Agricultural Labour.

The most important class of the labouring population of India is agricultural, and those who hire themselves out, are partly landless labourers and partly those who own small plots of land ; this labour is generally dear, inefficient and unreliable. It is difficult to get figures relating to the rates of wages for various classes of agricultural labourers for different provinces, but in the Punjab the average daily wage of unsettled agricultural labourers varies from 5½ annas to Re. 1/- a day ; of masons and carpenters from Re. 1/- to Rs. 2/- a day. The wages of rural labourers have been steadily rising (though there has been a slight set back owing to the recent depression) with the result that the

* The figures of the census of 1931 show that the number of agricultural workers has increased to 315 lakhs, and those of industrial workers to 2'60 lakhs.

general condition of the Indian labourer has improved. The Bombay Government has published a report of rates of rural and urban wages in the Bombay Presidency from 1913 to 1933; taking the wages of different classes of labourers in 1913 to be 100, the table below shows the relative wages up to 1933.

Year.	URBAN			RURAL		
	Field.	Ordinary.	Skilled.	Field.	Ordinary.	Skilled.
1921	179	184	180	159	148	156
1922	189	192	195	170	162	176
1923	200	200	196	171	171	187
1924	195	196	209	176	181	191
1925	221	208	224	206	181	211
1926	221	204	216	198	181	215
1927	200	192	211	176	176	206
1928	191	192	212	186	175	21
1929	188	193	206	180	179	213
1930	174	179	198	171	173	205
1931	153	157	185	139	143	172
1932	144	151	180	131	135	165
1933	137	141	178	127	127	160

INDUSTRIAL LABOUR

Although there has been a steady increase in the number of industrial labourers of India they still form but a small fraction of the Indian population. Factory labourers in India do not constitute a wage-earning class exactly corresponding to the factory workers in Western countries. In the latter there is a permanent labour class completely severed from the land, solely dependent upon their wages from industry. In India, although there is tendency towards the rise of a permanent class of factory workers in industrial centres such as Ahmedabad and Cawnpore, most of the factory labour is migratory in character. The average Indian operative is an agricul-

tourist by preference and a factory hand by necessity ; it is seldom that he severs his connection altogether with his village and small holding. In many cases he goes to the town alone, leaving his wife and children in the village where he has his home and to which he takes the first opportunity of returning. Such labour cannot be efficient and although its potential supply is large, there is a scarcity of efficient industrial labourers, even though their wages have risen more than rural wages, in fact more than doubled since 1913. A carpenter in the Punjab could only earn from 12 to 24 annas a day before the Great War ; during or just after the Great War he could earn about two rupees but again the wages have fallen on account of trade depression. In the Assam tea plantations, pitifully low though the wages be, the average monthly figures for men arose from Rs. 6-1-3 in 1913-4 to Rs. 7-0-9 in 1925-26, women from Rs. 4-1-5 to 5-12-7, and the children from Rs. 2-13-7 to Rs. 3-7-10. In the jute mills of Calcutta the wages of spinners rose from Rs. 3-8-0 per week to Rs. 5 and of weavers from Rs. 5-10-0 to Rs. 9-3-0. In the United Provinces the wages of skilled labourers in the engineering working shops doubled during the same period. This rise in wages was due to the increased demand of labour with the growing industrialization of the country, and to the rise in price generally, with the resulting demands for increased wages in order to meet the higher cost of living.

Weakness of Labour.

The rate of wages has been said to be determined by the limits set on the one side by the marginal productivity of labour, and on the other, by the standard of life of the labourer, which limits are fixed in each industry by the relative bargaining power of the employer and the labourer. The employer, however, is placed in a superior position to the labourer in the matter of bargaining for the following reasons ;—

(i) He has usually sufficient capital and wealth at hand to be able to afford to wait, while the average labourer is poor ; has no reserves upon which to fall back and must therefore find work or starve.

(ii) Labour is a perishable commodity, and if not employed on any one day it is lost for ever.

(iii) The employer is frequently more shrewd and better educated : he knows where he can get the cheapest supply of labour, while the labourer is often ignorant and often wants (or is compelled) to take advantage of the first opportunity of employment.

(iv) The labourer has to leave his home to work under conditions determined, and provided, by the employer.

The effect of all these things is, that the labourer can be forced sometimes to accept a wage below the competitive level, and we have seen how there is a tendency for wages in India to be driven down even below the level of a reasonable standard of life.

Trade Unions.

To overcome this difficulty, and to protect the interest of the worker, trade unions came into existence. They have been defined as "continuous associations of wage earners for the purpose of maintaining or improving the conditions of their employment."*

The objects of such associations are to :—

(i) Give greater strength to the workers in the matter of bargaining with employers. When this is done through the union representatives it is called "Collective Bargaining."

(ii) Educate labour, set up standards of efficiency of work, wages and hours of labour in a trade, and to produce among members a sense of co-operation.

* S. and B. Webb's "History of Trade Unionism in Great Britain."

(iii) Render help to members who are in need, (such as providing medical attendance), supporting them when they are ill, or out of employment, either through slackness of work, or through strikes, or lock-outs.

(iv) Increase the mobility of labour.

Trade Union Methods.

If the employers do not agree to the demands of the workers, trade unions can bring pressure to bear in various ways chiefly by means of the strike and boycott. In the former all the members of a trade union are called upon to stop working. When the workers refuse to work for a particular employer, and induce others also to refrain from working in his establishment, then they are said to have organized a boycott. The loss to the employer in such cases arises from the fact that the capital invested in the business is lying idle and there is also the danger of losing trade permanently through inability to supply to customers, who have to order elsewhere.

Growth of Trade Unions.

As one would expect from a study of the growth of industry, trade unions developed first in Great Britain, where they were looked upon as unlawful associations from 1799 to 1824. It was believed that their object was to interfere with the individual to work according to his pleasure, and this was against the current economic and political thinking of the time. They were regarded as "combinations in restraint of trade" and looked upon as conspiracies. In 1824 the Combination Laws, which declared such associations to be unlawful, were repealed and since then, acts have been passed in Britain which have recognized trade unions in some way or another. The whole legal position is very much confused but, during the last hundred years, the trade union movement has made remarkable progress in that country and in many other lands. There are more than a thousand separate trade unions in England,

with generally increasing membership, apart from temporary set-backs in times of bad trade. They send their representatives to the Trade Union Congress, the General Council of which is the central organ controlling and directing the industrial labour movement in the country. The power of these organizations was seen in 1925 when they organized a general strike, which brought to a standstill much of the business life of the country for about a week ; it was practically a complete stoppage in the big industries where the trade unionists were called out by their leaders. In Germany, at least until the change of Government at the beginning of 1933, the members of the unions constituted a large well-disciplined body of men whom the employers could not afford to ignore. In that country, however, there were only about fifty separate unions, and some had a very large membership.

Trade Unions in India.

In India it is only since 1918 that trade unions have been organized ; first, in Madras, by the efforts of certain social workers and then in the early years of the last decade in Bombay. In 1926 the Indian Trade Unions Act was passed, which gave labour unions the right to become registered and thus secure a legal status. Since then, trade unions have grown in number and influence, but they have a very long way to go before they can be compared with those of the European countries. The peculiar feature of the trade union movement in India is that it did not make in the early stage of progress much headway in the more important manufacturing industries and this constituted a weak point in the movement. The All India Trade Union Congress was organized in the early stages of the growth of the movement and has been holding sessions since 1920. In 1935-36 there were 236 registered trade unions with about three lacs members in British Provinces in the whole of India. The trade unions among railway workers

and postal employees are fairly well organized, but the unions seem to be weak in the textile and mining industries, and the dissensions inside the movement have checked the extension of its power and influence.

Industrial Disputes in India.

Although the strike may be a good weapon in the hands of the workers to improve the conditions of their employment, yet it is obvious that, during the period of strike, both the workers and employers lose and the community in general also suffers. Strikes should, therefore, be resorted to only when all other means of redress have failed, and this is now the practice generally in the best organized trade unions of Europe. The maintenance of harmonious relations between the capitalist and the labourer is a matter of great importance to the economic well-being of any industrial country. Strikes are the chief index of economic discontent among the labouring classes. The following table shows the number of disputes, men involved and working days lost in India. Strikes which used to be short and sporadic have lately become bitter, prolonged and chronic.

Years.	No. of disputes.	Men involved in (1,000).	Working days lost (1,000).
1928	203	507	31,647
1929	141	531	12,166
1930	148	196	2,262
1931	166	203	2,408
1932	118	128	1,922
1933	146	165	2,169
1934	159	221	4,776
1935	145	114	973
1936	157	169	2,358
1937	379	648	8,982
1938	399	401	9,199
1939	436	450	4,993

Labour unrest appears to be on the increase.

Strikes seem to be organized all too frequently judging by the large number of failures. The workers do not seem

to be able to clearly define their grievances; sometimes their demands are multifarious and extravagant, but on the other hand it must not be forgotten that the conditions of labour in many industries are deplorably bad and constitute a direct incentive to revolt. Strikes in most cases arise from wage disputes and disagreement over conditions of work. The organizers of these strikes have been mostly outsiders rather than workers themselves, just as was the case in the early history of the trade union movement in England. Most of the strikes began without notice and some have arisen out of political rather than industrial causes.

The Trade Disputes Act. To prevent the huge loss which those strikes cause to the country, the Trade Disputes Act (modelled on a similar Act passed in England after the General Strike of 1926) was passed in 1929 in India. This Act provides for the establishment of Courts of Enquiry and Conciliation Boards for the investigation and settlement of trade disputes; it prohibits strikes without notice in public utility services, and in industries such as railways, posts and telegraphs, telephones, water supply, lighting, etc.; it also makes provision to punish the people responsible for strikes resorted to for purposes other than purely industrial.

Labour Legislation in India.

With the growth of factory labour in the country the necessity for labour legislation has been realized. When thousands of poor and illiterate labourers come together to work in factories, it becomes necessary to regulate the conditions under which they have to work. The provision of satisfactory sanitary and health conditions in factories, the limitation of hours, employment of women and children under unfavourable conditions and the provision of decent housing conditions cannot be left entirely to the good-will of the employers, especially as this is often absent. The first Factory Act was passed in 1881 and its provisions were enlarged by the Amending Acts of 1911, 1922, 1923.

1926, 1929, 1932 and 1934 in accordance with the growing needs and demands of Indian labour.

This factory legislation applies to all industrial establishments employing twenty or more workers and using steam, water or other mechanical power, and also to some establishments employing more than ten workers. Electric-generating stations and water-works are also included. The main features of the present legal requirements in factories in India are :—

(i) The factories have been classified as Perennial and Seasonal. The former are those which work for more than 180 days in a year whereas those factories are considered seasonal which work for 180 days or less in a year. The latter depend on seasons, e.g., ginning of cotton. In the case of perennial factories *adult labourers* can work for a maximum of 54 hours a week and 10 hours a day, but in seasonal factories the maximum number of hours of work for them is 60 per week and 11 per day.

(ii) Children below the age of 12 are not to be employed in any factory ; even such children as are over this age are not to be employed without a medical certificate. Women and children are not to work in any factory before half past five in the morning, or after seven in the evening. It is an offence for a guardian or parent of a child to allow a child to work in two or more factories on the same day. Children below 15 cannot be employed in any occupation connected with the transport of passengers, goods or mails by railway or involving the handling of goods within the limits of a port by the Employment of Children Act passed in 1938 in pursuance of a convention of the International Labour Conference.

(iii) No child can be employed in a factory for more than five hours a day.

(iv) Labourers must be given one day's holiday in each week.

(v) Regular rest periods must be provided for one hour in every six hours, except in case of men working not more

than 8½ hours a day, in which case the interval may be reduced to half an hour; no person is to work for more than five hours continuously if he is an adult, or for more than four hours if a child.

(vi) Women must not be employed on night work.

(vii) The atmosphere of a factory is not to be rendered so humid as to be injurious to the health of the workers. There are also stringent provisions intended to protect the health of the worker in zinc and lead factories.

(viii) Factory inspectors are given authority to compel the repair of factory buildings and the fencing of machinery. In case of danger they may prohibit the use of machinery and plant until it is repaired. All these and many other minor provisions are all for the benefit of the labourer.

Workmen's Compensation Acts.

Legislation has also been enacted to protect factory workers from accidents and to get compensation for them if and when they receive injuries in the course of their work. The first Workmen's Compensation Act was passed in India in 1923, but by various Acts of later dates its scope has been greatly widened and the Act as it stands to-day covers over seven million industrial workers in the country. The principle of these Acts is that compensation should ordinarily be given to workmen who have sustained injuries by accidents arising out of and in the course of their employment. Compensation is also to be given under certain circumstances for diseases. The scale of compensation is based on the average wage of the worker and in the case of an adult worker is a maximum of Rs. 4,000, Rs. 5,600, and Rs. 30 per month for death, permanent disablement and temporary disablement respectively. In case of minors the amount of compensation for death and for permanent total disablement are at a uniform rate of Rs. 200 and Rs. 1,200; respectively and half the monthly wage for temporary disablement. In the year 1935 there were in all 23,000 accidents out of which 700 were fatal and the rest

non-fatal. The total amount of compensation paid by employers was about twelve lakhs of rupees.

Indian Mines Acts.

The above provisions also apply to the mines in India and in addition Special Mines Acts have been passed in 1901, 1923, 1928, 1932, 1935, and 1937. No mine is to work for more than twelve hours in a day with the same set of workmen. No person is to work for more than 60 hours a week if above ground and for more than 54 hours a week if underground. The daily work above-ground cannot be more than ten hours and underground nine hours. No child below fifteen is employed. Restrictions have been placed on the employment of women underground by the Government of India and after 1st of July 1939, women are totally prohibited from working underground.

Industrial legislation is thus considerable, but much remains to be done, and in 1929 a Royal Commission on labour was appointed to make a thorough investigation into the labour conditions of the country. The Commission (known as the Whitley Commission from the name of its chairman, the late Mr. John Whitley, ex-Speaker of the British House of Commons) spent almost two years looking into the problem in all its aspects and their recommendations were published in a report issued in 1913. For any one interested in Indian labour problems, a careful perusal of this is well worth while, as it contains a mass of carefully sifted information on the subject.

The Government of India classified these recommendations under six different groups according as they involved or required :

1. Central legislation ;
2. Administrative action by the Government of India ;
3. Provincial legislation ;
4. Administrative action by local governments and administrations ;
5. Action by public bodies ;

6. Action by employees and their organizations or by Workers' Unions.

The provincial governments were requested to give careful consideration and examination to these recommendations, but provincial governments have so far attempted little legislation implementing the Commission's recommendations. The Government of India has passed six Acts on the recommendations of the Commission.

The Payment of Wages Act.

Perhaps the most advanced and difficult piece of social legislation attempted in India is the Payment of Wages Act which was passed by the Central legislature in 1936 and modified in 1937. The object was to ensure prompt payment of wages and to control the deduction which an employer may make from the wages of his workmen in respect of fines and services. The Act in the first instance applies to factories and railways, but can be extended by local governments to other workshops of manufacturing establishments. The main features of the Act are :—

(a) No wage period shall exceed one month and all wage payments must be made in coin or currency notes.

(b) payments must be made within seven days of due date in the case of factories employing less than 1,000 men and within ten days in the case of others.

(c) deductions from wages are permitted only in respect of fines, absence from duty, damage to or loss of goods expressly entrusted to an employed person for custody, housing accommodation supplied, income tax, provident funds.

(d) No fines are to be imposed on children below fifteen, and fines may be imposed only in respect of acts exhibited in notices with the approval of the government. Fine deductions cannot exceed more than two pice in the rupee of workman's wages and the amounts realized are to be spent for the welfare of the workers.

(e) Deduction on account of absence from duty cannot be more than proportional to the period of absence.

The Employer's Liability Act of 1938. This Act was passed in pursuance of the recommendations of the Royal Commission on Labour which makes the employers liable to pay wages to a workman for injury suffered by him during the course of the employment even though caused by the default of a fellow workman, and imposing upon the employers the obligation to explain to the workman fully before employment, the risk attaching to the employment.

SUMMARY

The problem of Distribution is not that of division from a common storehouse but of incomes. The net aggregate of the commodities and services, which the labour and capital of a country, acting on its natural resources, annually produce, is the National Dividend. This is a continuous flow, not a fund, and is apportioned among the four factors of production according to the value put by the community on their services. Under competitive conditions the price of each factor is determined by market conditions.

The marginal productivity of each factor determines how much of it is going to be employed, just as the marginal utility of a commodity determines how much of it is to be consumed, but on the supply side, we have not an exact expense basis on which to calculate the cost of production of Land, Labour, Capital or Organization.

The price paid for the use of land is called Rent. Economic Rent is not necessarily what the tenant pays to the landlord, but the differential advantage enjoyed by any piece of land (or other natural agent) over the land (or agent) which is on the margin of cultivation (or use). The supply of land being absolutely fixed by nature, it is the demand for produce that determines which land is to be brought into cultivation. As the price of the produce rises it pays to bring inferior grades of land into cultivation. The worst grade taken into use, or that which it is just worth while to cultivate, is the marginal land which pays no rent. Such land is a free gift of nature and has previously remained unused. The price of produce determines rent, and not rent the price.

The price paid for the use of capital is called Interest. As all capital can be converted into money, interest is paid as a percentage rate calculated on the amount borrowed. The supply of capital depends on saving, which in turn depends on thrift, foresight, power and will to save. Some saving there will be even if no interest is paid, but, as a bird in the hand is worth two in the bush, there will not be sufficient saving unless some price is paid to those who not only do the saving, but also permit others to use their wealth. The rate of interest is determined at the point where the marginal productivity of capital is equal to the price which is just sufficient to induce the marginal saver to refrain from spending.

The price paid for the services of labour is called Wages. In the modern industrial system there is a distinct class of wage earners, working

under capitalists or employers. The demand for labour depends on the marginal productivity of labour, but the supply of general labour depends on population and efficiency. Population has a tendency to press on, if not to outgrow, the means of subsistence, hence unless there is some check on the growth of population, or on improvement in the efficiency of the lowest class of labourers, wages will tend to fall to the minimum of subsistence. This has happened in India, where the majority of labourers are unskilled and therefore they stick to agriculture, which is already overmanned. But in more advanced industrial countries the level of general wages is determined by the standard of living of the workers.

Profits are the remuneration of the entrepreneurs. The amount left to the organizers after paying rent of land hired interest and capital borrowed and the wages of labourers engaged is gross profit. This may be made up of various elements, e.g., rent of entrepreneur's land, interest on his own capital, wages of his own labour of management, monopoly gains, chance gains, and lastly, pure personal gain from the exceptional ability and enterprise of the entrepreneur. This personal gain is known as the Pure, or Net, or Economic Profit.

Walker propounded the theory that profits are just like rent, i.e., they are the earnings of the differential ability of the entrepreneurs and are measured like rent, from the no-profits employer upwards. Modern economists have enlarged and amplified this doctrine, holding that there is a normal rate of profits, which is earned by all businesses in an industry and that no entrepreneur will continue to produce for long unless he earns at least this normal rate of profit. Consequently in the long run, there cannot be a class of "no profits" employers. Even marginal employer-earn a normal rate of profits and above this rate, profits are measured by the exceptional ability of the entrepreneurs. The normal rate of profits does enter into the price of the produce, as it forms a part of the cost of production.

QUESTIONS AND EXERCISES

1. "Distribution is a problem of income" -- Explain.
2. What is the National Dividend?
3. If you have to divide the total wealth produced in a country among all its citizens, on what different bases would you do it? On what principles is it divided at present?
4. "The present system of distribution of wealth tends to make the rich richer, and the poor poorer." Discuss this statement.
5. How does the modern system of distribution differ from that in an Indian village fifty years ago?
6. How does the valuation of services of the factors of production differ from that of other goods or commodities?
7. "The present system of distribution does not take account of the fact that labourers are human beings, but rather regards them as merely lands." Discuss.
8. Why is there a rate of interest? Is there a similar rate of rent, and of wages, and of profits?
9. What is the average rate of wages paid to a sweeper in an Indian village or in a town? Why does the rate in towns differ from that in villages and why is a sweeper paid less than a doctor?

10. What are real wages? How would you calculate the real wages of a (a) professor, (b) chauffeur, (c) railway guard? Distinguish real from nominal wages. (P. U. 1934, 1936.)

11. Write a short account of the growth of the Trade Union Movement in Great Britain.

12. Write an essay on "Trade Unions in India."

13. What is a strike? How would you justify the organization of strikes?

14. Explain what is meant by the following terms: (g) Conciliation Boards, (h) Factory Acts, (i) Workmen's Compensation, (d) Minimum Wage, (e) Social Insurance, (f) Socialism, (g) Compulsory Arbitration, (h) Lock-outs.

15. Write a note on the right to picket "blacklegs".

16. What is Collective Bargaining and what is its effect on the general level of wages?

17. Analyse the various elements of gross profits. What are Pure or Net Profits?

18. Write an essay on (a) Sanitary Conditions in Indian factories (b) Hours of Labour (c) Welfare Work in Industry, (d) Employment of Women and Children in Factories.

19. Why are the wages of women generally lower than those of men? How would you improve the efficiency of women workers in India?

20. What is Usury? How far is it prevalent in India? Do you know of any measures to check and prevent it?

21. Are all persons able to obtain loans at the same rate of interest from the market? Do you think the rate of interest will ever fall to zero? Give reasons for your answer.

22. State and criticise the Ricardian Theory of Rent.

23. Rent does not enter into price"—Explain.

24. What is "Quasi Rent"?

25. Is Land Revenue in India a tax or rent?

26. What do you understand by "Land Nationalization"?

27. "The inefficiency of Indian labour is the result of low wages." Discuss the statement. (P. U. 1936.)

28. Explain the influence of supply and demand in the determination of wages. (P. U. 1936.)

29. Write a short note on the influence of standard of living on wages. (P. U. 1936.)

30. What criticism would you offer of the way in which land revenue is (a) assessed (b) collected in the Punjab? (P. U. 1937.)

31. What factors govern the supply of capital? What will be the consequence of the following on the supply of capital on the rate of interest? (a) Growth of saving institutions, (b) Successive foreign invasions, (c) Fall in the duration of life. (P. U. 1938.)

32. Describe the advisability and practicability of limiting, by legislation the rate of interest charged by money-lenders in villages. (P. U. 1933.)

33. Why is rent called producers' surplus? Does rent enter into cost of production? (P. U. 1933.)

34. What do you know of factory conditions in India? Examine the chief features of the Indian legislation. (P. U. 1933.)

35. How is the supply of various agents of production affected by the price they fetch? (P. U. 1934.)

36. Define Economic Rent? How is it affected by progress of society? (P. U. 1934.)

37. Why has there been a marked fall in agricultural rents in this province during the last five years? Is it likely to continue? (P. U. 1935.)

38. How does the rate of interest affect savings? Would people stop saving if the rate of interest were reduced to zero?

39. In what ways has factory legislation improved the condition of the labouring classes in India? (P. U. 1937.)

40. Define capital and indicate the conditions that determine its supply. (P. U. 1934.)

41. Why is capital saved? How is the rate of interest determined? (P. U. 1936.)

42. Define and analyse 'profits'. Are you justified in calling profits a surplus? (P. U. 1935.)

43. Would you expect profits to be higher when the value of money is rising or when it is falling?

44. How is the rate of interest determined?

State (giving reasons) how the rate of interest in the rural areas of your province will, other things being the same, be affected by the following:—

(a) a successive failure of crops.

(b) an imposition of restrictions on the granting of loans.

(c) improvement in agriculture. (P. U. 1939.)

45. How does efficiency of labour affect wages? Are wages under a system of barter necessarily real wages? If not why not? (P. U. 1939.)

46. What does an economist understand by distribution? Indicate how the mode of distribution is of great economic significance. (P. U. 1938.)

47. What is economic rent? Will there be any economic rent if

(i) all plots of land are alike in fertility and situation.

(ii) the landowner himself is the cultivator of land?; Give reasons for your answer. (P. U. 1938.)

48. Carefully explain the relationship between wages and standard of living. (P. U. 1938.)

CHAPTER XXII

PUBLIC FINANCE

The State and its Functions.

The organization of people for internal and external protection is called the Government. People have always lived under some form of government ; there have always been some persons who have been given, or have acquired, the authority to manage and control the actions of other people. It may be the father of the family who manages its affairs and is responsible for safety and welfare of the members, or the heads of a village community who are responsible for the protection of a village ; it may have been the leader of a tribe who led the people to war and peace, or some dictator who has seized power, or it may have been some elected body voluntarily invested with supreme authority over the lives and property of the people.

A community thus organized for law in a definite area of land is called a State ; the government protects its citizens from attacks of enemy countries and enforces rules of conduct for the safety and welfare of the people within its territory ; it purports to give them justice, peace, security and strength. As time goes on, more and more work is undertaken by public bodies on behalf of the people they represent. To-day governments not only provide for such essentials of civilization as peace, justice and defence, but also for education, public health, railways, post offices, and irrigation ; there are also a number of local bodies doing the work of making, repairing, cleaning, and lighting of streets, making arrangements for water and transport supplies. and many other public works of similar character.

What is Public Finance ?

For the performance of these important functions the state requires money and all modern states spend huge amounts of money in providing the various services. Most States keep large armies and navies for external defence, and have police, courts of justice and jails for the administration of justice inside the country. Large sums are needed for the building of schools, hospitals, railways, canals, roads, etc. The manner in which the government obtains the revenue from its citizens to meet its needs and how it spends the money for the common good is called Public Finance.

Principles of Public Finance.

An individual requires money for his daily expenses and to manage his own affairs, but private finance differs from public in its essential principles. Most people try to earn as much as possible, and regulate expenditure according to income. A man must live within his means, and "cut his coat according to the cloth." If he is prudent and reasonably well paid, he should be able to save something from his income. The state, however, unlike the individual, looks first to its expenditure; it decides how much is necessary and advisable to spend in the interests of the people; and then looks for the means of raising that amount of money; the coat is not to be "cut according to the cloth" but the size of the coat is already known and the requisite cloth for its making is to be procured. An attempt has to be made to get just sufficient to meet the needs of the country, so that the revenue balances the expenditure. The spending should be done without extravagance and the collection of revenues made with the least possible expense. The burden on the people has to be as light as possible, consistent with providing what are regarded as necessary, or desirable, services. The imposts must be fairly and equitably distributed over all sections of the community, *i.e.*, among those who, presumably, benefit by the expenditure.

Management of Indian Finances.

In the days of the East India Company there was no finance department to manage and control the collection and expenditure of revenues, but when the responsibility for the administration of India passed from the hands of the Company to the Crown, a Finance Department was created. Owing to the expenses of the Mutiny, the debt of the country had increased when the Crown took control; there was need of still more expenditure and new taxes had to be levied to meet the needs. •

Centralized Administration.

At first the responsibility for the collection of the revenue was entirely in the hands of the central government, and the provinces had no control over the finances; even if they wished to engage a sweeper, the sanction of the central authority had to be obtained. Under such a system the provincial governments felt little responsibility; they had no incentive to be economical and regularly made increasing demands on the central government. In 1867, Lord Mayo, then Governor-General, saw the necessity for giving some authority to the provincial governments and a fixed sum out of the Indian revenues was allocated to each province. After some time the provinces were given a fixed share in the revenues for the upkeep of the police and jails, education and medical services. All the residuary revenue was retained by the Government of India for its own needs. Lord Lytton, when he was Viceroy, made a division of the items of revenue and expenditure into the three classes of Imperial, Provincial and Divided. The central government was responsible for the payment of the home charges, maintenance of the army and navy, central administration and foreign affairs, posts, telegraphs, mints and railways; all these were under its care. The purely central heads of revenue were salt, opium, customs and tributes from the Indian States. Irrigation was divided between central and provincial governments, as were also the proceeds of land revenue and assessed taxes. The provinces had now to

provide money for education, police, health and sanitation and took all the revenue from registration fees. They had, however, still to obtain the sanction and approval of the Indian Government for their revenues and expenditure and had no power to borrow money or to raise loans. The British Parliament has now no control over Indian revenues except that its sanction has to be obtained for expenditure on military operations beyond the frontier. A financial statement for India is placed before the House of Commons every year and is passed as a matter of course.

Montagu-Chelmsford Reforms.

With the growth of the demand for the transfer of financial responsibility and control to the representatives of the people, necessity was felt for the transfer of more control to the provincial governments. The Reforms introduced by the Government of India Act of 1919 made important changes in the system of financial management. A clear demarcation was made between central and provincial finance. The Government of each province was made responsible for raising its own revenues and the system of divided heads was abolished. Each province had its own Finance Department with a Finance Member in charge and had also the right to raise loans. Within a province the various items were divided into Reserved and Transferred subjects. The latter were under the control of ministers chosen from among the elected representatives of the people, while the Reserved subjects were under the control of the Governor-in-Council.

Since 1919 provincial finance was practically separated from the imperial finance and with one reservation the local governments were made masters in their own financial houses. The reservation was that the provinces had to make certain fixed annual contributions to the Government of India; they varied as between province and province and the total was about ten crores. These charges were

felt to be burdensome by the provinces and were remitted in 1928-29. The Government of India now holds the growing heads of such revenues as Customs and Income-tax, while the sources of revenues of the provincial governments are more or less static and inelastic. The provinces now claim an adequate share in the growing government revenues and the question of giving to each province such share in the revenues as will put it on a stable financial footing to meet all its internal requirements without interference from central government is important.

Government of India Act 1935 and the New Reforms.

Vast changes in the direction of Indian self-government were brought about by the Government of India Act, 1935. The new Act embodies two main principles. The first is Provincial Autonomy with a government responsible to an elected legislature in every province. The second is that there will be at the centre a responsible Government of India based on federation of British Indian Provinces and Indian States. The new constitutional provisions relating to the Provincial Governments were brought into force on 1st April, 1937. There is, however, inevitable delay about the inauguration of federation. This is due to the reason that the treaties of the Indian States are with the British Crown and these will require modification in case the states desire to enter federation. Meanwhile at the centre, the constitution established by the Act of 1919 prevails subject to certain changes here and there.

The Provincial constitution provides for the executive authority on behalf of His Majesty to be exercised by the Governors. It also provides for a council of ministers to aid and advise the Governors. The Governor chooses the ministers who hold office during his pleasure and only such are selected as are likely to have the support of the Legislature. The Governor is to be guided by the advice of the ministers except in special cases for which other provisions exist in the Act.

Under the Act there will be eleven Governor's provinces, namely, Madras, Bombay, Bengal, the United Provinces, the Punjab, Bihar, the N. W. F. Province, Orissa, the Central Provinces and Berar, Assam and Sind. **Niemeyer Report.**

An investigation was considered necessary about the Provincial and Central finance as a corollary to the Government of India Act, 1935. Sir Otto Niemeyer was entrusted with this work and his report was published in April 1936. The Report proposed immediate financial assistance by the centre from the beginning of provincial autonomy to certain provinces* partly in the form of cash payments and partly in the form of cancellation of the net debt incurred previous to April 1, 1936, and partly in the form of distribution to the jute growing provinces of a further $12\frac{1}{2}$ per cent. of the jute tax.

The Central Government was also to distribute 50 per cent. of the proceeds of the income tax to the provinces in the following proportion :—Madras 15, Bombay 20, Bengal 20, U. P. 15, Punjab 8, Bihar 10, C. P. 5, Assam 2, N. W. F. Province 1, Orissa 2, and Sind 2. No distribution is to take place if the Central Government does not get at least Rs. 13 crores from its share of the income-tax and the contribution from the Railways.

Territorial Classification of Revenue and Expenditure.

The revenue and expenditure of the Government are now classified into central, provincial and local. At the beginning of the financial year the Finance Member or Minister of each of these bodies places before the members what is called a Budget which is the annual Balance Sheet

*Annual cash payments are as follows :—

To the U. P. Rs. 25 lakhs for 5 years only, to Assam Rs. 30 lakhs, to Orissa Rs. 40 lakhs, to the N. W. F. P. Rs. 100 lakhs (subject to reconsideration after 5 years) and to Sind Rs. 105 lakhs to be reduced by stages after ten years.

of the country, or province, or local body, and contains an account of all the items of income and expenditure of the respective authorities. Usually an account is first given of the closing year's income and expenditure and this shows whether there was a balance or a deficit. Then come the estimates for the coming year on the basis of the closing year's figures. If it is expected that the revenue will not be sufficient to meet the expenditure, then proposals are made for tapping fresh sources of income; if, on the other hand the revenue is expected to be greater than expenditure, suggestions are made for the utilizing of the surplus.

EXPENDITURE

The chief heads of Imperial, or Central expenditure are shown on the next page.

Military Expenditure.

A glance at this table shows that "military service" is the largest single item in the expenditure of the Government of India. The country has the protection of the British Navy on the seas, but the land frontier is large, and considerable expenditure is incurred in keeping the frontier tribes under control. Large armies are also maintained with the avowed object of keeping peace between the different communities in India. It is frequently suggested that military expenditure is very heavy and it has been reduced in recent years; the government has also introduced the policy of gradual Indianization of the army. In this and other ways, it is hoped that further large reduction in military expenditure will be possible.

1. General Statement of the Revenue and Expenditure.

(In thousands of Rupees.)

	For details vide state- ment.	Accounts 1939-40.	Budget Estimate 1940-41.	Revised Estimate 1940-41.	Budget Estimate, 1941-42.
Revenue					
Principal Heads of Revenue:—					
Customs ... A		458761	391600	377500	351100
Central Excise Duties		65250	101400	85010	121000
Corporation Tax		23776	53000	44700	126200
Taxes on Income other than Corporation Tax		141993	142000	163400	230000
Salt		108588	82000	77000	83000
Opium		4714	4737	4717	5285
Other Heads		9948	11027	11130	11097
Total Principal Heads ...		813030	788464	763447	927682
Railways; Net Receipts (as shown in Railway Budget)...	"	340709	378207	439780	410942
Irrigation; Net Receipts ...	"	83	74	26	84
Posts and Telegraphs: Net Receipts	"	26326	10672	17131	20953
Debts Services	"	7605	6138	6238	6129
Civil Administration	"	10672	10539	11364	11271
Currency and Mint	"	12766	12439	21686	22144
Civil Works and Misc.	"	2995	3281	3091	2845
Public Improvements	"	14660	12006	15621	13467
Miscellaneous	"	7252	58856	8193	4414
Defence Services	"
Contributions and Miscellane- ous Adjustments between Central and Provincial Gov- ernments	"
Extraordinary Items	"	31577	40289	105818	30552
Total Revenue		1257675	1317365	1392395	1450483
Deduct	"	84206	138455
Total		1257675	1317365	1476601	1588938

Charged to Revenue of the Central Government.

(In thousands of Rupees.)

	For details vide state- ment.	Accounts 1939-40.	Budget Estimate, 1940-41.	Revised Estimate 1940-41.	Budget Estimate, 1941-42.
<i>Expenditure :</i>					
Direct Demands on the Revenue ...	B	38586	40716	38765	43587
Capital Outlay on Salt Works charged to Revenue ...	"	6	64	61	21
Railways : Interest and Miscellaneous Charges as shown in Railway Budget ...	"	297390	325130	340219	309100
Irrigation ...	"	982	1082	963	971
Posts and Telegraphs ...	"	7358	6929	6836	6970
Debt Services ...	"	120023	121113	114016	120575
Civil Administration ...	"	111243	119056	127332	131143
Currency and Mint ...	"	3923	6163	11022	9721
Civil Works and Miscellaneous Public Improvements ...	"	26935	32277	30312	37583
Miscellaneous ...	"	38621	36656	36663	28204
Defence Services ...	"	502643	594074	728353	845666
Contributions and Miscellaneous Adjustments between Central Provincial Governments ...	"	30571	30523	30508	30447
Extraordinary Items ...	"	79465	4091	11661	24950
Total Expenditure Charged to Revenue ...		1257675	1316874	1476601	1588938
Surplus ...		...	491	...	...
Total ...		1257675	1317365	1476601	1588938

Public Debt.

This is a large item in most national budgets and is the second largest item in the Indian budget. When the management of Indian affairs was transferred from the East India Company to the Crown, the government took over the debts of the Company, amounting to 107 crores of rupees; these have been increased in many ways since then, so that in 1926 the total debt of India stood at 967.48 crores. The increase was due largely to loans made for development of railways and irrigation works, India's contribution to the Great War, the budgetary deficits and losses on the sale of silver. The total debt is divided into productive and unproductive debts; of the total of 11,97.90 crores on 31st March 1941, 82 per cent. was productive debt and only 18 per cent. was unproductive. A statement of the debt of Government of India on 31st March 1941 appears below :—

Debt of the Government of India.

"Interest-bearing Obligations of the Government of India on the 31st March, 1941 (Budget Estimate).

In India

Public debt			(In crores of rupees)
Loans	...	...	434.65
Treasury Bills	...	...	39.30
<i>Total</i>	...	...	473.95
<hr/>			
Unfunded debt	...	..
Service Funds	...	..	0.93
Post Office Savings Bank	...		80.73
Post Office Cash Certificates			55.44
State Provident Funds	...		77.98
Other items	...	.	11.24
<i>Total</i>	...	..	226.23
<hr/>			
Deposits	...	...	41.65
Total Obligations in India			741.92

<i>In England</i>		
Public Debt		
Loans	...	389'21
War contribution	...	20'62
Capital portion of annuities		
created in purchase of railways	...	42'12
<i>Total</i>	...	451'95
<hr/>		
Unfunded debt	...	4'03
Total obligations in England...		455'98
Grand Total	...	1,197'90

The total amount of interest to be paid on the debt in 1940-1 was about twelve crores on general debt services, and 20 crores on railway capital. The net receipts from railways were about 38 crores while provincial governments obtain large revenues from irrigation. There is thus a considerable profit to the State from such public debt services and India's general financial position appears to be relatively sound, as the unproductive debt is small compared with that of many other countries; *e. g.*, the debts of most European countries are far greater. England's National Debt now is about £7,000 million, *i. e.*, nine or ten times as large as it was a hundred years ago.

Home Charges.

A certain amount of the expenditure of the Indian Government has to be incurred in England in what are known as the Home Charges.* These are met by the balances which foreign merchants have to send to India to pay for Indian exports which exceed the imports in value

* The various items constituting the Home charges are :—

- (i) Expenditure of the High Commissioner for India
- (ii) Part of the Expenditure of the India Office
- (iii) Contribution made by India to the British Government for the services of the British Regimental troops in Indian territories and of the British Navy in Indian waters.
- (iv) Pensions and allowances of retired civil and military officers in England.

almost every year. The Secretary of State in England sells Council Bills to such merchants, and receives English money in London on behalf of the Indian Government. The amount due from these English merchants is paid out of the Indian treasury to the exporters in India.

PROVINCIAL EXPENDITURE

The heads of expenditure of the provincial governments are as follows :—

1. Direct demands on revenue including the salaries of the officials and the staff, working expenses, charges of administration, etc., etc. These expenses are essential, to be incurred by the Government, to get revenue under the major heads of Land Revenue, Excise, Stamps, Forest, and Registration.

2. Irrigation Revenue Account, consisting of interest on debt and miscellaneous irrigation expenditure.

3. Irrigation capital account charged to revenue.

4. Debt services comprising of interest on ordinary debt and reduction or avoidance of debt.

5. Civil administration, including general administration of reserved and transferred departments, administration of justice, jails, police, convict settlements and prisons.

6. Beneficent Departments, *e. g.*

Education.

Medical.

Public Health.

Agriculture.

Industries.

7. Civil Works.

8. Miscellaneous : Famine relief and insurance, pensions, stationery, printing, etc.

9. Contributions to Central Government.

10. Civil Contingencies Fund.

11. Capital expenditure not charged to Revenue, and drainage works, industrial development, hydro-electric development, civil works, etc.

CENTRAL SOURCES OF REVENUES

For meeting this expenditure the government can issue loans and obtain revenues from the following sources :—

1. Revenues from state ownership of lands and buildings.
2. Income from productive undertakings.
3. Irregular revenues from fines, penalties, gifts, indemnities, escheats and forfeitures.
4. Revenues from taxation.
5. Fees from non-economic sources such as gun licences, etc.

Provincial.

The chief heads of the revenue of the provincial governments are as follows :—

1. Land Revenue.
2. Excise.
3. Stamps.
4. Forests.
5. Registration.
6. Certain taxes which provincial governments may impose at their choice.
7. Irrigation receipts.
8. Interest.
9. Civil administration.
10. Capital receipts
11. Receipts from beneficent departments, e. g., education, medical, public health, agriculture and industries.
12. Hydro-Electric (excess of receipts over working expenses) as in the Punjab.

The Punjab Budget Estimates for the years 1941-42 are given in the attached table.

Budget Estimate of the

(Source :—

('000 omitted).

Head of Account.	Accounts of 1939-40.	Revised estimate of 1940-1.	Budget estimate of 1941-2.
<i>Principal heads of revenue :</i>			
Taxes on income ...	22.32	33.28	35.68
Land revenue ...	2,34.20	2,94.88	2,97.24
Excise ...	1,04.98	1,06.28	1,06.71
Stamps ...	74.55	68.78	68.36
Forests ...	25.39	33.92	30.77
Registration ...	8.50	8.72	8.72
Receipts from Motor Vehicle Tax- ation Act ...	13.49	14.07	14.04
Other taxes and duties ...	11.44	14.13	24.78
	4.94.87	5,74.06	5,86.30
<i>Beneficent Department :</i>			
Education ...	21.37	21.72	21.80
Medical ...	12.38	14.03	12.53
Public Health ...	3.95	4.48	4.87
Agriculture ...	16.65	20.03	26.96
Veterinary ...	2.88	3.20	3.81
Co-operative ...	4.13	5.57	7.07
Industries ...	7.75	8.45	8.16
	69.11	77.48	85.11
Irrigation ...	5,08.70	5,14.96	4,92.50
Administration ...	21.21	22.94	22.26
Civil Works ...	28.78	32.86	28.74
Hydro-Electric ...	10.87	5.51	10.63
Miscellaneous ...	28.31	27.87	27.46
Debt Services ...	3.76	4.22	4.07
Miscellaneous adjustments between the Central and Provincial Govern- ment ...	3.25	3.51	3.51
Total revenue receipts ...	11,69.46	12,63.41	12,60.58
Extraordinary receipts ...	41.63	82.51	68.09
Grand Total ...	12.11.09	13,45.92	13,28.67

Punjab Government.

Budget Values,

Head of Expenditure.	Accounts of 1939-40.	Revised estimate of 1940-1.	Budget estimate of 1941-2.
<i>Direct demand on revenue :</i>			
Land revenue ...	44,35	44,99	43,70
Excise ...	11,48	10,30	11,50
Stamps ...	1,47	1,46	1,50
Forests ...	25,43	26,67	28,36
Registration		67	70
Charges on account of Motor Vehicle			
Taxation Act ...	65	1,45	3,56
Other taxation	1,09	1,13	1,20
	85,06	86,67	90,52
<i>Beneficent Department :</i>			
Scientific	29	21	22
Education ...	1,63,51	1,65,29	1,67,75
Medical ...	50,60	50,86	51,02
Public Health ...	18,01	23,51	27,75
Agriculture ..	36,62	40,21	48,38
Veterinary ...	18,49	17,60	18,67
Co-operatives ...	17,81	20,08	23,22
Industries ..	18,80	20,82	22,24
	3,24,13	3,38,58	3,59,25
Irrigation ...	1,58,26	1,62,94	1,63,95
Administration ...	3,30,48	3,46,69	3,49,41
Civil Works ..	1,29,97	1,32,36	1,40,42
Miscellaneous ..	1,95,47	1,77,41	1,68,15
Debt Services	-17,46	-5,60	-15,35
Total revenue expenditure ...	12,05,91	12,39,05	12,56,35
Capital Expenditure ..	10,30	10,16	"
Grand total ...	11,95,60	12,49,41	12,56,35

PRINCIPLES OF TAXATIONS

Nature of Taxation.

Specific Revenues. A study of the sources of government revenue shows that considerable sums are received from direct charges on specific persons for services rendered, *e. g.*, the carriage of persons and goods by rail, and transmission of letters by post. These are called specific revenues.

Taxes. Taxes are compulsory contributions made to the government for which there is no *direct* return. They differ from specific revenues, in that they are levied on practically all persons in the community, in order to cover the cost of the services rendered by the State to people in general. When a man pays for a railway ticket he gets a definite service in return, *i. e.*, he is carried from one place to another, but when he pays income (or land tax), he does not receive anything directly in return at the time of the payment; he benefits indirectly in so far as the money is spent for the good of the whole community of which he forms a part.

Taxes may be direct or indirect: the former are those in which the burden is borne by the person on whom they are levied *e. g.*, income-tax which is borne directly by every assessee. An indirect tax is one in which the burden may be shifted by the person on whom it is levied to some other person; it is levied on one person but may be borne by another. Thus, if a tax is levied on petrol, it is paid in the first place by the importers of petrol, but it is likely to be borne ultimately by the motor car owners. The person on whom a tax is imposed is said to receive the *impact* of the tax. If he can shift its burden on to the shoulders of another, that person is said to bear the *incidence* of the tax. In a direct tax the impact and the incidence are on the same person, while in an indirect tax the impact and the incidence are on different persons.

Direct taxes are generally considered to be better than indirect, because it is possible to apportion their burden according to the subject's ability to pay ; they are paid by people with full knowledge that they are contributing their share to the fund, and usually the charge cannot be shifted on to another person. Their cost of collection is, however, relatively heavy and their burden is sometimes felt keenly by the tax payers, who often attempt to evade the payment. The great advantage of indirect taxation is its convenience ; the payer frequently does not know that he is paying a tax. Indirect taxes are often easy to collect and the cost of collection is usually small. Sometimes they are levied with social or economic objects in view, *e. g.*, to encourage, or discourage, the use of certain articles in consumption.

Divisions of Indian Revenues. Indian revenues may be classified as :—

1. Tax revenue, divided into :—

- (a) Receipts from direct taxes, *e. g.*, Land Revenue and Income Tax.
- (b) Receipts from indirect taxes, *e. g.*, customs, excise salt, opium, stamps and registration.

2. Non-tax Revenue, including receipts from :

- (a) Government or public undertakings, *e. g.*, railways, irrigation, public works, posts, telegraphs telephones, stationery, printing.
- (b) Social services, *e. g.*, education, hospitals, sanitation.
- (c) Loans or debt services.
- (d) Miscellaneous, *e. g.*, military receipts.

Taxes play an important part in modern finance. Every government has to levy them in order to meet its expenditure. Of the total central and provincial revenues in India, taxes form the major portion, as they are about sixty per cent. of the whole. Of this tax revenue, the

income from direct and indirect taxes is about thirty and seventy per cent. respectively.

The question then arises, what things should be taxed and how much should be realized from each member of the state? On what principles, and in what proportion should citizens be made to bear the admitted burden of taxation?

Adam Smith's Canons of Good Taxation.

Adam Smith in his famous book, "The Wealth of Nations" to which reference has been made earlier, laid down the following four canons of taxation.

(i) *Equality.* Taxes should be just and equitable, and every person must contribute in proportion to his ability to pay. Equality in taxation does not mean that all citizens should pay an *equal* amount; there is no justice or equality if the rich and the poor have to pay the same amount. The rich are usually able to pay, not merely in proportion to their higher incomes, but even more, and the rate of taxation should be not merely proportional, but progressive; equality in taxation means equality of *sacrifice*. Really what is meant is that the burden should be equitable, which is not necessarily equal. If a rich man pays a hundred rupees out of a thousand he does not make as much sacrifice as a poor man who pays ten rupees out of a hundred, although the proportions are the same. On the principle of equality of sacrifice, the income-tax in India is assessed on a graduated basis; it is also a progressive tax, the rate of which rises as the incomes on which it is levied become higher.

(ii) *Certainty.* The tax which each individual is bound to pay, ought to be certain and not arbitrary. The time of payment, the manner of payment, and the amount to be paid, ought all to be clear and plain not only to the contributor but also to every other person. The govern-

ment should also know how much it will receive from the tax, so that it can make an almost exact estimate of the revenues it expects to obtain in the following year.

(iii) *Convenience*. Every tax should be levied at the time, and in the manner, in which it is most likely to be convenient for the contributors to pay. In India, the land revenue is collected usually when the crops have been gathered and sold ; income-tax is deducted from the salaries of many people often without their knowing that they are paying a tax.

(iv) *Economy*. The tax should be such as will entail the least possible cost in collection, in order that the greater net benefit may accrue to the state from the amount paid by the tax-payer.

To these four principles laid down over 160 years ago by Adam Smith, modern economists have added the following :—

(v) *Productivity*. The tax should not only be productive of revenues for the state, but also it should be such as will not in any way diminish the productive capacity and the economic resources of the nation ; e. g., a productive duty may encourage infant industries, while an indiscriminate tariff may ruin certain industries or industry generally.

(vi) *Elasticity*. The system of taxes should be so devised that the revenues of the state automatically expand with its growing needs. A tax which provides an increasing return as the population and wealth increase is said to be elastic. The chief defect of the Permanent Settlement of Bengal has been that the revenue from land in that province could not expand with the needs of the community. In temporarily settled areas the land tax can be revised and enhanced with the increase in the productivity of the land. Income-tax is a good example of an elastic tax ; its yield increases with the economic development of the country and *vice versa*.

(vii) *Simplicity.* Finally, a tax system should not be complicated, but should be intelligible to every person.

Main Features of Indian Taxation.

1. *Land Revenue.* The importance of this in the Indian fiscal system is very great, as it brings in more than one third of the total net revenues of the state. It is now a provincial item and varies from province to province according to the nature of the settlement. It is levied on all lands which are intended for cultivation, and amounts to about sixteen rupees per head of the population. It is a direct tax borne by the cultivator, but it has been called a land tax, because it is supposed to be more in the nature of rent than a tax.

2. *Income Tax.* This is the most important item of revenue in England. It is the only suitable direct tax yet devised, which can be properly graduated and the burden of which can be fairly distributed. In India the imposition of this tax has always caused discontent and its cost of collection has been heavy. It was first imposed in 1860 and soon abolished; restored in 1888, it now forms an important source of revenue. In 1916, the principle of progression, or graduation, was introduced and incomes below Rs. 2,000 per annum were exempted until 1932, when incomes of not less than Rs. 1,000 were brought within the taxable limit in order to meet the temporary financial stringency.

Incomes up to 2,000 were again[†] exempted and new rates of income tax and supertax drawn up on the slab system were introduced in the Budget of 1939-40. The new rates* are as follows :—

*Income tax on incomes just above 2,000 is to be restricted to half the excess of the income above Rs. 2,000. Rate of Income tax for companies is 2 annas 6 pies in the rupee and that of supertax one anna in the rupee on the whole income (no exempted slab)

Income Tax

For first	Rs. 1,500	of income, nil.
Next	Rs. 3,500	9 pies in the rupee
Next	Rs. 5,000	1 anna 3 pies in the rupee.
Next	Rs. 5,000	2 annas in the rupee.
Balance of income		2 annas 6 pies in the rupee.

Super Tax

For first	Rs. 25,000	nil
Next	Rs. 10,000,	1 anna in the rupee
"	Rs. 20,000,	2 annas in the rupee
"	Rs. 70,000,	3 " "
"	Rs. 15,000,	4 " "
"	Rs. 1,50,000,	5 " "
"	" 6	" "
Balance of income	7	" "

With the introduction of this new scale the existing surcharges (first imposed as an emergency measure in 1931) have been abolished.

3. *Customs.* Custom duties are also important sources of revenue and they are the most important indirect taxes ; in imposing them, however, the state has to consider not merely the collection of revenue, but also, how for the imposition will affect the trade and industries of the country. In 1860, imports were taxed at the rate of 10 %. This met with serious opposition in England and there were abolished, except those on salt and liquor which were retained to counter-balance the excise duties levied within the country on those articles. In 1894, the poverty of the Exchequer demand an increase of taxation and a 5% duty was imposed on all imports except cotton, on which a 3% duty was levied, with a counter-vailing excise duty at the same rate. In 1917, the import duty on cotton was raised to 7½% without a corresponding increase in excise duty. The general rate was raised to 11

% in 1921 and in the following year to 15%. It is to be borne in mind that the accepted principle on which the customs duties were levied up to this time was that of free trade, i. e., their object was simply to obtain revenues and not to protect any industry. On the recommendations of the Fiscal Commission, however, the policy of protection was adopted in India and duties levied accordingly. The cotton excise duty was completely abolished in 1925, and in 1930 a 20 per cent preferential cotton duty was levied, which was raised again in 1931. Customs revenue rose from 11.31 crores of rupees in 1913-14 to 44 crores in 1937-38, and fell to 40 crores in 1938-39.

4. *Salt Tax.* This is one of the oldest taxes in India and is paid by even the poorest man, as all salt consumed in British India is subject to duty. It is charged in the form of a tax on imported salt and as an excise duty on salt produced in the country under licence; money is also received from the sale of salt produced by the government. The general rate of duty, which stood at Rs. 2/- per maund, was reduced to 1/12/- in 1903, to Rs. 1/8/- in 1905 and Re. 1/- in 1907. In 1916 it was reduced to 1/4/- and doubled in 1923. This increase raised a storm of protest in the country and it was again reduced to Rs. 1/4/- in 1924. The civil disobedience movement which began in 1930, originally aimed at breaking the salt laws and thus to reduce the salt revenue. Prior to March, 1931, the excise duty and import duty on salt were always kept similar, but by the Indian Salt Act, 1931, a temporary additional customs duty of 4½ annas per maund was imposed on foreign salt. The duty was reduced to 1/9/- with effect from 30th September, 1931, but in March, 1933, custom duty was raised by 2 annas. In April, 1936, the additional import duty was reduced to 1½ annas per maund.

Some Features of the Non-Tax Revenue.

Opium. The government has a monopoly of the sale of opium in the country, and in the past there has been a very considerable export to China. In 1906, the Chinese Government requested the Indian Government to help them in the suppression of its use, and an agreement was made with China for the gradual diminution, and ultimate extinction of the export of opium from India.

Post and Telegraph. The primary object of government in these services is not to raise revenue but to provide a cheap and easy service; small profits have, however, been made. Probably in no country in the world are internal letters carried at so cheap a rate as in India considering the distances which they travel.

Railways and Irrigation. The revenues from these form the major portion of the receipts (apart from taxes) of the Government of India. Many of the railways and canals are the property of the State and have been built for public convenience, not with a view to making a profit; the undertakings as a whole have, however, been very profitable. The railway earnings were formerly one of the items in the general revenues, and this made it very difficult to manage the railway finances on a purely commercial basis. Now, the railway budget has been separated from the general budget, in order that railway administration may be placed on a proper economic basis.

LOCAL ADMINISTRATION AND FINANCE**District Administration.**

Provinces in India are divided into Districts as units of administration. These vary very much in size, in different parts of the country, but the average is about 5,000 square miles, with a population of about a million inhabitants. The officer in charge of a district administration is usually a member of the Indian Civil Service, and is called the

Collector in the "Regulation," and the Deputy Commissioner in the "Non-Regulation," provinces; he is a most important office—really the backbone of the administration. Although he is the representative of the Central Government he is the "man at the spot" and is held responsible for the peace and government of the district, which depends a good deal on his judgment and personal knowledge of its affairs. His duties are manifold. As a Collector he is responsible for the collection of the land revenue and taxes and for the maintenance of land records and registers; he hears appeals from the decisions of revenue officers and subordinate revenue courts of the district, he appoints *Patwars*, *Lambardars*, *Sufaidposhes* and *Zaildars*; he is a first class magistrate with power to hear criminal cases regarding the commission of offences other than those punishable with death or transportation for life, he has also appellate and revisional jurisdiction over second and third class magistrates of his District. He is head of the District Police and has supervisional powers over the District Board, municipalities, hospitals and schools. He is thus the executive head of the District and he has also judicial and revenue duties. Combination of judicial, executive and fiscal powers in one officer leads to efficiency of administrative control although it may work unjustly in certain cases. The exercise of those powers demands the utmost care on the part of these officers.

The other officers in a district are a Superintendent as head of the police; an Executive Engineer who is responsible for Public Works; the District Inspector of Schools who is responsible for educational efficiency; and the Civil Surgeon in charge of the hospitals and public health. All the officers, though directly under their own departmental heads, work under the guidance and supervision of the Collector, or Deputy Commissioner, and

immediately subordinate to him are the *Tahsildars* who are executive heads of the *Tasils*, or administrative divisions of the District. They are assisted by the *Naib Tahsildars*, who are directly responsible for the collection of land revenue and other taxes, through the agency of *Patwaris* and the *Lambardars*. For the administration of justice, there are civil and criminal courts in the Districts. The trial of criminal cases is done by the magistrates who are subordinate to the District Magistrate and the Sessions Judge. The civil cases are tried by judges directly subordinate to the District Judge and through him to the High Court. The administration of civil justice is thus made independent of executive control.

Village Communities.

Small rural communities have existed in Indian villages from very ancient times, and they were self-governing in the old days. These *Panchyats*, as they were called, accustomed the people to cherish a spirit of freedom and to learn to co-operate in common aims. The first among these aims was joint defence against any neighbouring community which might be hostile. A second important aim was the prevention of internal strifes by the settlement of disputes among the villagers. A third was the disposal and management of land, forest or pasture belonging to the local community not allotted in severalty to members, or of arable land in which there were usually rights assigned to each individual, even if such claims were only for a limited time and subject to re-allotment when the period had expired. These small village panchayats were the units of local self-government, but the establishment of local, civil and criminal courts, and the introduction of the revenue and police organization by the British Government, resulted in their disappearance. Though the panchayats have lost their old powers and solidarity, they still play a very prominent part in the social life of the country.

Local Self-Government.

It was recognized (perhaps rather late) that the centralization of control would make administration top-heavy and during Lord Ripon's period as Viceroy, local-self-government was first introduced in 1883-84 into India. Progress has been slow and difficult, but a great advance has been made. Local bodies called Municipal Committees and District Boards, with a diversity of powers, were established all over the country; these legislative bodies in small areas were meant to give to the people a training in self-government and to throw a certain amount of responsibility on to those who lived in a particular area. The three Presidency towns of Calcutta, Madras and Bombay have what are called Corporations, constituted under special Acts, and most of the other large towns have municipalities, the majority of members of which are elected. In the year 1938 there were 781 municipalities in India and more than fifty per cent. of the members of these bodies were elected. There are over 21 million people resident within their limits.

Functions of the Municipalities.

The municipalities are given some control over the many affairs of town government, and their numerous functions are classed under the four heads of Public Safety, Health, Convenience and Instruction. There are certain duties which are obligatory, *e. g.*, lighting, watering and cleaning of public streets and spaces; checking of public nuisances, protection against fire, regulation and abatement of offensive or dangerous trades and practices, removal of obstructions in public streets, and places; securing or removing of dangerous buildings, reclamation of unhealthy localities, disposal of the dead, construction and maintenance of public streets, culverts, boundary works, slaughter houses, latrines, drainage and sewage works, baths, washing places, drinking fountains, tanks, drains and wells; the possession

of a water supply ; naming streets and numbering houses, public vaccination and the supply of animal lymph ; public hospitals and dispensaries, primary education, measures of precaution and relief during visitations of epidemic diseases and the periods of famine and scarcity.

The municipalities may also undertake the construction and control of new streets, public parks, gardens, libraries, museums, halls, offices, rest-houses, and other public buildings, education above the primary stage ; planting of roadside and other trees, taking census records in connection with vital statistics ; surveying ; precautionary measures connected with dogs and places of carrying on offensive trades ; sewage arrangements for private property and sewage farms ; public receptions, ceremonies and exhibitions.

Sources of Revenue.

To perform these functions the municipalities may raise revenue from :—

- (i) Octroi duties levied on articles of general consumption entering the town.
- (ii) House or land taxes.
- (iii) Professional and trade taxes.
- (iv) Taxes on animals and vehicles.
- (v) Local rates.
- (vi) Tolls on roads and ferries.
- (vii) Lighting rates.
- (viii) Conservancy rates and receipts.
- (ix) Passenger taxes.
- (x) Terminal taxes.
- (xi) Fines.
- (xii) Letting of municipal land and buildings.
- (xiii) Educational and medical fees.
- (xiv) Receipts from markets and slaughter houses.
- (xv) Interest on investments.

Income and Expenditure of Municipalities in the Punjab in 1937-38.

INCOME.	Amount.	EXPENDITURE.	Amount.
	Rs.		Rs.
General Departments	1,33,89,787	General Department	60,56,925
Education	10,26,129	Education	24,98,426
Medical	1,65,000	Medical	14,36,375
Public Health	6,90,139	Public Health	32,57,196
Water Supply	11,02,026	Water Supply	13,74,614
Veterinary Department	1,41,232	Veterinary Department	58,109
Municipal Works	9,266	Municipal Works	17,30,017
Suspense Accounts	7,40,112	Total ordinary Expenditure	6,86,044
Total Income	1,72,63,691	Total Expenditure	1,70,97,706

The total annual income of the municipalities in India is at present over Rs. 14 crores. The burden of municipal taxation per head of population varies in different places; in the Presidency towns it is from 90 to 14 rupees; in the municipalities of the Punjab about Rs. 4; in the U. P. Rs. 2-3-0, in Madras Rs. 2, and in Bengal about Rs. 2-12-0 per head.

Work of the Municipalities in the Punjab.

The Annual Municipal Administration Report and Returns for 1935-36 shows that the number of Municipalities during the years rose by 3 to 121. The number of members was 1368; of these 111 were officials and 1257 non-officials. Of the Presidents 77 were elected non-officials, 28 elected officials and the rest nominated officials. The total income during the year was 1'89 crores and expense 1'57 crores. The expenditure on education was 33.06 lakhs. Most of these bodies are on their way to recovery from the financial stress which they have experienced during recent years and there is a general quickening of interest in municipal affairs. A very important event of the year was the supersession of the Lahore Municipal Committee by the Government on account of chronic mal-administration and failure to discharge its functions properly and the appointment of an Administrator. An Improvement Trust has also been established at Lahore with a view to look to the improvement of the city. Executive officers have been appointed in various municipalities in the Province under the Executive Officers Act. The efforts of these officers can only succeed if the members co-operate with them.

Income and Expenditure of Small Towns in the Punjab in 1937-38.

Income.		Amount.	Total.	Expenditure.		Amount	Total.
		Rs.	Rs.			Rs.	Rs.
<i>Taxes and Tolls—</i>							
Property town rate	...	91,659		General	...	1 17,678	
Personal town rate	...	1,48,495		Burning and burial of paupers	...	329	
Profession tax	...	2,723		Fairs	...	4,911	
Tax on animals and vehicles	...	3,914		Lepers and lunatics	...	3,702	
Tax on dogs	...	11		Miscellaneous	...	69 352	
Terminal tax	...	97,439		Conservancy and sanitation	...	1,80,819	
Octroi	...	22,403		Water supply	...	21,867	
Local rate	...	...		Medical including plague and vaccination.	...	45,566	
Other taxes	...	16,448	3,83,092	Education	...	1,11,313	
<i>License Fees—</i>							
Vehicle	...	2,766		Watch and ward	...	76,945	
Premises for sale of articles of food or drink	...	5,624		Markets and slaughter houses	...	7,944	
Store-houses for explosives, petroleum	...	1,021		Gardens and road side trees	...	12,797	
Yards or depots for trade	...	701	10,112	Pounds	...	4,073	
Slaughter-house and market fees	...	18,643		Roads	...	63,465	
Other miscellaneous fees	...	66,076		Street lighting	...	57,868	7,78,458
Medical fees and contributions...	...	7,615					
Education fees and contributions.	...	25,487					
Rents	...	1,48,419					
Sale-proceeds	...	45,768					
Pounds	...	9,102					
Fines	...	2,700					
General grants and contributions	...	28,838					
Miscellaneous	...	34,386					
Loans	...	3,105	7,83,343				

District Boards.

District and Local Boards have been established for rural areas and most of them contain an elected majority. They get their revenue from land cesses and perform much the same functions, and possess similar powers in their areas, as those of the municipalities in towns.

All the land in the Punjab is subject to the payment of a local rate not exceeding ten pies for every rupee of its annual value, i. e., double land revenue. "and the proceeds of this rate are credited to the District Fund. The District Boards are also empowered to levy certain taxes and fees. The obligatory duties of a District Board are :—

(a) The management of all property vested in the District Board.

(b) The construction, repair and maintenance of public roads and other means of communication.

(c) The establishment, management, maintenance and visiting of public hospitals, dispensaries, *serais* and schools and the construction and repairs of all buildings connected with these institutions,

(d) The training of teachers and establishment of scholarships.

(e) The supply, storage and preservation from pollution of water for drinking, cooking and bathing purposes.

(f) The planting and preservation of trees.

Local governments may also direct the control and administration of the following matters by a District Board :—

(a) Management of any property vested in His Majesty.

(b) Establishment, maintenance, visiting and management of markets, rest-houses, camping grounds and the repairs of all buildings connected with these institutions.

(c) construction and repair of embankments and the supply, storage and control of water for agricultural purposes.

(d) Preservation and reclamation of the soil and the drainage and reclamation of swamps.

(e) Construction, repair and maintenance of famine prevention works and the establishment and maintenance of such relief works, relief houses, and other measures in time of famine or scarcity as may be entrusted to the charge of the Board by the local government.

(f) Registration of marriages, births and deaths.

(g) Fairs and agricultural shows and industrial exhibitions.

(h) Establishment and management of funds.

(i) Management of public ferries.

(j) Any other local works or measures likely to promote the health, comfort, convenience and interest of the public or the agricultural or industrial prosperity of the country.

In almost every district of British India, save in the province of Assam, there are District Boards, subordinate to which are two or more Sub-District Boards. There are about 207 district boards in India with more than 16,000 members, of whom 73 per cent. are elected.

Budget of the Punjab District Boards in 1937-38.

PUBLIC FINANCE

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<i>Income</i>		<i>Amount.</i>	<i>Expenditure.</i>	<i>Amount.</i>
		Rs.		Rs.
General	...	14,78,877	General Departments	...
Local rate	...	59,61,709	Education	...
Halsiyat tax	...	6,02,276	Medical	...
Other taxes	...	28,823	Public Health	...
Fees	...	4,51,567	Veterinary and Stock-Breeding	...
Stage Carriages Act	...	70,727	District works	...
Cattle Trespass Act	...	1,36,730	Total ordinary expenditure	...
Northern India Ferries Act	...	2,44,868	Extraordinary	...
Income from Board Properties	...	5,74,172	Suspense Accounts	...
Education	...	87,12,963	Total expenditure	...
Medical	...	8,27,788		
Public Health	...	1,95,498		
Veterinary and Stock-Breeding	...	99,795		
District works	...	6,32,503		
Total Ordinary Income	...	2,00,18,296		
Extraordinary Income	...	60,093		
Suspense Accounts	...	8,07,898		
Total Income	...	208,86,262		

20,17,004
1,14,31,163
23,70,728
8,30,858
7,49,351
23,26,059
1,37,24,663
3,94,882
8,24,645
2,09,44,190

Improvement Trust.

A notable feature in the recent sanitary history of India is the activity displayed by the great cities in the direction of social improvements. In Bombay, Calcutta, Lucknow, Allahabad, Rangoon and Cawnpore the Improvement Trusts developed important activities, *e.g.*, opening up congested areas, laying out or widening streets, providing open spaces. Other cities like Lahore are beginning to follow the examples of these great cities. The Government of India established an Improvement Trust to attend to slum clearance in Old Delhi city and to the general expansion of their winter capital.

SUMMARY

The state requires funds, not only for the discharge of necessary functions, such as defence, and maintenance of peace and order, but also for other optional functions which are undertaken for the good of citizens. The study of the manner in which revenues are raised and expended by the State is called Public Finance ; this differs from private finance, in that, whereas an individual has to spend according to his income, the State has to look first to its expenditure, and then to raise the necessary funds. The balance sheet which gives the annual estimates of revenues and expenditure is called the Budget.

Financial administration was highly centralized in India after the Mutiny but gradually control has been transferred to the provinces, until now each province is responsible for certain heads of revenue as well as for expenditure ; it is proposed to give all residuary revenue and expenditure to the provincial governments under the new constitution.

The chief items of expenditure of the Government of India are military and civil administration, railways, irrigation, posts and telegraphs. Interest on debt also forms a substantial item, but the financial position of the country is relatively sound, because the bulk of the debt is productive, and is earning interest.

The provincial governments are responsible for the expenditure of their own administration, and on irrigation, education, sanitation and other similar beneficent services.

The revenue of the State may be derived from (i) government property, (ii) commercial undertakings, (iii) fees and fines and (iv) other specific revenues and taxes.

The last mentioned differ from the other revenues in that they are a compulsory contribution from all citizens, without there being direct return for the charge.

Taxes may be direct, *e.g.*, those in which the impact and the incidence are on the people who pay them ; and indirect, or those in which the incidence and the impact or on different persons.

A good fiscal tax must be just, convenient, certain, economical, elastic and progressive. It is just, if the burden of the taxes is distributed so as to make the sacrifice, but not necessarily the payments, equal. The sacrifice will be equal, not necessarily when the taxes are proportional to income, but when they are progressive. An income-tax is good from this point of view, but no single tax is entirely satisfactory and a fiscal system should be judged as a whole.

About seventy per cent. of the Indian revenues are derived from customs, income tax, salt tax, and land revenue. The remaining revenues are from railways, posts, telegraphs, forests, irrigation and excise duties.

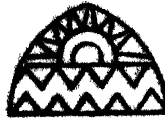
The unit of administration in India is the District, with the District Officer as a very important figure. Village communities which were the units of self-government in olden times, have lost much of their solidarity, but an attempt is being made to bring them to their old importance. Municipal Committees and District Boards have been established and given powers to levy certain taxes, rates, tolls and octroi duties. They have also compulsory and optional duties concerned with the health and welfare of the citizens in their areas.

Questions and Exercises

1. What is the State? Why does it exist and what are its functions?
2. "Defence is more important than opulence." Explain.
3. What kind of industries do you think should be managed by the State? What are the commercial functions of the Government of India? Give reasons for your answer.
4. What is the main difference between public and private finance?
5. Who is the president of the District Board or Municipal Committee in the place where you live? How many members are there? How many of them are elected and what functions does this body perform? Discuss its latest Budget.
6. What is a tax? What taxes are paid by the people in an Indian village? What is the burden of taxes on each villager?
7. What amount of income-tax should be paid by people with the following incomes.
 (a) Rs. 800 per annum.
 (b) Rs. 5,7000 ..
 (c) Rs. 9,900 ..
8. What are the Home Charges paid by the Government of India and how are they met?
9. Make a list of the officers responsible for order and government in your District and outline the duties of each.
10. Trace the growth of provincial finance in India. What is federal finance?
11. Take the latest budget of the Indian Government, prepare a list of the heads of income and expenditure, and their approximate amounts or proportions.
12. What is the meaning of "Equity in Taxation"?

13. Trace the incidence of the taxes on (i) income (ii) salt (iii) petrol (iv) houses in a town.
14. What is the approximate amount of the National Budget of India? How has it grown? If you were the Finance Member would you reduce or increase it? Give reasons for the suggestions.
15. Give various heads of central, provincial and local revenues and expenditure.
16. What is a surplus and what is deficit in a budget. Is a good thing to have either?
17. Give the history of the Indian customs duties.
18. "The Indian tariff has been a revenue tariff." Discuss.
19. Why was the salt tax levied in India and why was it resented by the people? What was the effect of the civil disobedience movement on the salt tax and what would be the effect of the abolition of the tax on the Indian Budget?
20. How would you justify the curtailment of the opium duty?
21. What is the principle underlying excise duties?
22. Name the important sources of Revenue of Central and Provincial Governments. (P. U. 1933.)
23. Indicate the manner in which District Administration in India can become more useful? (P. U. 1934.)
24. Distinguish between direct and indirect taxes? State your own view as to the ground of distinction? (P. U. 1934-36.)
25. Are you satisfied with municipal administration in your country? If not, what improvement would you suggest? (P. U. 1934.)
26. Give an account of the District Administration in the Punjab? What are its defects, and how can they be removed? (P. U. 1936.)
27. What are the functions of a municipality? How does it obtain funds to discharge those functions? (P. U. 1935.)
28. Explain the following terms :—
(a) tax, (b) fee, (c) fine, (d) penalty, (e) special assessment. (P. U. 1935.)
29. What are among the principal sources of Central and Provincial Revenues in India? (P. U. 1939.)
30. Briefly describe the economic activities of a municipality with which you are acquainted. Suggest how such activities can increase economic welfare. (P. U. 1938.)

FINIS.



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